

Weather Patterns – Prolog

It hit 126°F today, a new high. That's surprising because this past winter had record cold temperatures, getting down to -14°F. Well, so much for being in a temperate climate zone. Today was beyond uncomfortable and the power drain for air conditioning had caused brownouts in many areas and blackouts in a few. Today is August 15, 2012.

We had seen it coming because of the ongoing drought conditions. Agricultural economists were suggesting up to an 80% reduction in grain crops. It was universal and affected corn, wheat, oats, soybeans, edible beans and even Idaho's potato crop. Hay yields were down due to lack of moisture. The crops that many rarely gave consideration, like sugar beets, weren't any better off.

Lack of hay and grain would force the price of meat higher than it already was and it was at record highs in grocery stores. Moreover, the stores didn't seem to have as much as they usually had.

Across the northern hemisphere, everyone was affected. Even the Russians had a greatly reduced corn crop. Europe was in the same boat, due mainly to temperatures rather than water. They had turned to irrigation, which had worked so far. It drained their aquifers, making it, at best, a temporary solution.

Supporters of the global warming theory were saying, *we told you so*. Those who disagreed pointed to the record low temperatures around the world and insisted that the global warming, while true, was leading the planet irrevocably towards an ice age.

In the United States, droughts had occurred before and would happen again, witness the Dust Bowl years of the Dirty Thirties. Sure there was a drought, but poor farming practices had been the core issue during the Thirties. Drought is a normal, recurring feature of the climate in most parts of the world. It is among the earliest documented climatic events, present in the Epic of Gilgamesh and tied to the biblical story of Joseph's arrival in and the later Exodus from Ancient Egypt. Hunter-gatherer migrations in 9,500 BC Chile have been linked to the phenomenon, as has the exodus of early humans out of Africa and into the rest of the world around 135,000 years ago.

In a way, it was a case of water, water everywhere and not a drop to drink. The high summer temperatures were melting the polar ice thereby raising sea levels thereby encroaching on the continental coastlines. Countries were building desalination plants to convert the seawater to drinking water, even in the US. One key point most kept in mind was to build the plants well above sea level. It started earlier this year.

Weather Patterns – Chapter 1

“What are we going to do?”

“Irrigate the field we have with the irrigation well and have wells drilled in the other 3 fields.”

“How are we going to pay for 3 wells?”

“I haven’t figured that out. I thought about just putting in 1 this year for the second 80 acre field. Since the long term outlook is for limited rainfall, we’ll have to do it in stages.”

“What do you intend on planting?”

“Forty acres of soybeans, 20 acres of corn and 20 acres of alfalfa. That will allow us to feed the livestock. I’ll tell you one thing; it is good we waited to sell off last year’s crops, as little as they were.”

“When are you going to plow and disk the garden?”

“I’ll plow it this morning and disk it this afternoon. Are you sure you want to double it?”

“Have you seen the prices for groceries recently? It’s not so much I want to double it as we need to double it. We have more than enough Mason jars and will only really need lids. Susan and Rob can help me. We may need more shelves in the basement to hold the jars.”

“I’ll see if I can find some decent steel shelving on sale. If I can’t, I’ll build more wood shelving using 2x4s and OSB. Did you get all your seed bought?”

“Yes I did. I planned on planting hybrid seeds this year and switching to open pollinated heirloom seeds next year. Janice said she had enough seeds saved up to provide us with enough for any sized garden we might want to plant.”

“Will those open pollinate seeds produce enough food?”

“She said they would.”

“Ok, that’s your department Tammy. Next year I’ll probably have Rob helping me in the fields.”

“Robert Benton, you’ll do no such thing. Rob is 11. If you really need help, use Susan, she’s 14 and already knows how to drive a tractor.”

After I plowed and disked the garden, it wasn’t level enough to really plant so I mounted the rototiller on the 3-point hitch and made a pass through the now doubled garden plot.

It was looking better, but I decided to make a second perpendicular pass to really get it level. I got lucky; there was room between the fence and the end of the garden to turn around.

I plowed the fields last fall after harvest and all I really had to do was disk and make a pass with a drag harrow. I decided to plant a fescue mixture on the barren fields to hold down erosion. I started planting the alfalfa followed by the corn and finally the soybeans. I left a lane to reach the alfalfa since we'd get 2 harvests and possibly 3. That depended upon how much of the irrigation water made it down the slope past the soybeans and corn.

Finally, I planted the fescue mixture. Truthfully, I wasn't sure the seed would even germinate, the 2 80 acre and 1 70 acre field were that dry. But, Lord love a duck, we got a slow rain and a few days later the fields took on a green look. The 80 I planted with crops was the wettest of the fields and had the 4" irrigation well. It required careful planting to make sure the furrows lined up with the outlets in the single irrigation pipe.

"We'll be ok if it doesn't get too hot. The irrigation will keep the plants going unless it gets too hot. I have to tell you, Tammy, people who can't irrigate won't be producing crops. We won't either if it gets hot enough. If push comes to shove, I can set up a misting system to keep the livestock cool but I can't make it big enough to cover 80 acres."

"Can we set up misting for the garden if necessary?"

"I have to see about the crop insurance. I'll check on some kind of irrigation nozzles like the folks in town use on their lawns after I do that. Generally speaking, I think we can come up with something. Another idea may be some sort of netting to shade the plants slightly from the sun.

"The soybeans are the most water demanding of the field crops so they're closest to the irrigation pipe. Corn needs water at the tasseling stage and we'll just have to hope the alfalfa gets enough water."

"Going to be a tough year, isn't it?"

"I'm afraid so. I heard on the farm news that they estimate that the total crop planted this year will be about 5% over last year. We'll know one way or another how it turns out by mid-July."

"When are you going to town?"

"I suppose now is as good of a time as any. Do you need something?"

"I hate to ask. I guess I can just ride in with you."

"What do you need?"

“Always, Maxi-pads.”

“I can get those. There is no reason for you to ride in just for pads.”

“I just thought...”

“That I’d be too embarrassed? When I was younger, I probably would have been too embarrassed. It’s strange how men won’t buy feminine hygiene supplies but think nothing of buying toilet paper. Biggest package they have?”

“Yes, please.”

After I’d taken care of the insurance and got garden netting plus tubing, nozzles and a metering device to water the garden with enough extra to set up a misting system for the livestock, I stopped by the drug store and picked up her Always. My last stop was the gun store.

“Did my rifle come in?”

“It sure did. It’s really nice but why didn’t you order the standard model? It’s cheaper and has the same rifling as the Loaded.”

“It does but the barrel isn’t a medium weight air gauged match barrel nor does it have the other National Match features that the Loaded does.”

“Are you sure those features are worth what they cost?”

“I think so. Did the mount, rings and scope come in?”

“Got those and the shotgun shells. There aren’t any people in this County that have a rig like this. Are you planning on a hunting trip out west?”

“I wasn’t planning on one, no. You said the shotgun shells came in?”

“Yes they did. You sure have strange tastes. I can’t remember ever having someone order a case of Brenneke 3” Black Magic slugs. That Remington Express Magnum buckshot is going to kick you into the next County if you’re not careful. Both the 00 and the no. 4 came in. Why do you want it?”

“I’ve been reading some stories by an author who was raised in Iowa. From what I understand from his stories, he left Charles City in 1961 to join the Air Force. When he got out, he began college at ISU. Eventually, he got his Bachelor’s degree from Wartburg and moved to Des Moines to attend Drake.”

“What for?”

“They had that JD-MBA program that his brother talked him into. He quit law school but got his MBA. His brother got both and went back home to practice law. Do you have a total?”

“Here you go.”

“Ouch.”

“Don’t complain to me, I gave you a discount. I only charged you MSRP of \$1,640 for the Standard model versus \$1,794 for the Loaded model. What are you going to do for rifle ammo?”

“I got some from the east coast, 168gr BTHP Match made by Prvi Partizan of Serbia. It was expensive at \$14.75 per 20-round box. I bought one case of 1,000 rounds.”

“Surplus?”

“No, it was new production. It gets pretty good reviews.”

After I paid for my purchases and put them in the truck, I headed home. Tammy was planting the garden and after I put my gun store purchases away, I put the pads in the bathroom and grabbed the materials needed to install the garden misting system. He didn’t really give me that big of a discount; his margin on the rifle was 23%.

“How’s it coming?”

“I’ll be at this most of the week.”

“I got the supplies for the misting system, tubing, nozzles, T fittings and a meter. I got something similar for the livestock. Your pads are in the bathroom and I picked up that order at the gun store.”

“Why do you need an M1A when you already had a SR-556?”

“I bought the SR-556 for you along with the Glock G-19 and the 870 combo.”

“Are you expecting a war?”

“I think it’s possible.”

“Before or after the drought?”

“After. I’m of the opinion that the oppressive heat and the drought will make tempers short and the resulting hunger due to reduced crops could set the stage for trouble.”

“What else are you going to buy?”

“The Glock G-21SF with Glock light will probably be what I choose for a handgun. I bought the ammo when I got the 5.56 and 9mm. The ammo I bought you was Lake City M855 plus Speer 124gr Lawman for practice and 124gr +P Gold Dot for carry, assuming it comes to that. The .45acp ammo I bought was Speer 200gr Lawman for practice and 200gr +P gr Gold Dot for carry.”

“What do you mean by assuming it comes to that? Why would I need a concealed carry permit?”

“Under normal circumstances I doubt that you would. It might be better to get a permit so you have it in case a sudden need arises. Be that as it may, can I help you with the garden?”

“Yes please. Plant the 6 rows of Roma tomatoes and the one row of beefsteak. After you have those in, plant the anaheim chilies and the green preppers.”

Weather Patterns – Chapter 2

She had the tomato rows laid out 30” apart and told me to plant the seedlings that she’d started from seed a couple of months back 2 foot apart. I noticed that she’d added compost and knew I’d have to get a bale or two of oat straw for mulching and moisture retention. Altogether, I planted 7 rows of tomatoes, one of chilies and 2 of green peppers. By then, she had the potatoes, corn and squash planted and had almost finished the 3 rows of onions.

We’d thin the onions and eat green onions with the lettuce as it came up. It started to cool off, a sure sign that it was getting late. The misting system would just have to wait. I left to get the livestock in and Tammy left to get supper around. Tammy fixed green beans, fried round steak and boiled potatoes. She used the grease from frying the steak with a little flour and milk to make gravy. It was a fairly standard meal in this area.

“This is good.”

“Same ol’, same ol’. You must be hungry. Did you buy me high capacity magazines for that Ruger you claim is mine?”

“Yes I did. Their magazines are some kind of plastic and only ran \$15 each. That’s less expensive than a steel magazine for the Mini-14. I bought 8 spares giving you a total of 11 magazines. We’ll have enough of the M855 to load for all 11 magazines three times. We’ll get more ammo when we have a little extra pocket money.”

“Oh, next year? That soon?”

“It will be sooner than that. I wanted to discuss the Glock G-21SF with you before I ordered it. Is it ok for me to buy it?”

“You already bought the ammo so you’d better get a gun to shoot it. How many extra magazines?”

“I’ll get 5. It will give me a total of 7. I’ll also buy the Glock gun light.”

“I’m still trying to figure out the Glock G-19, don’t confuse me. Where did you get the idea to buy an M1A?”

“Frank Connors has one. Last time I was there on business, I stopped by and he was on his way to the range. I went along and the rest is, as they say, history.”

“Ok, finish out your purchases and put a lid on it.”

I can assure you I didn’t say *yes dear*. If she chose to interpret my nod as acceptance, she was in for a rude awakening. I still need the magazines for the M1A and more ammo for both rifles. I figured I could get the mount installed with the rings and the scope. I

couldn't really afford something like the Nightforce or Leupold and selected a Weaver V series 2-10x38mm Riflescope.

Time was on my side and I eventually got everything assembled and the 20-round CMI magazines ordered. I ordered 10 since they discounted \$2 per magazine if you bought 10 or more, which nearly paid for the 10th magazine. I also ordered the Glock but it was backordered and there'd be a wait. We had 2 steers ready for market and I sold them. I turned around and bought another 1,000 of Lake City M855 and 1,000 of 168gr BTHP Match made by Prvi Partizan. While I was at the gun store, I asked about mounting a weapon light on her Glock G-19. It was as simple as buying a Glock light. I'd mount a Glock light on the Glock G-21SF when I got it. If they had more than one model, I'd buy the cheapest. (It didn't work out that way; I bought the GTL 22 for me and the GTL 10 for her.)

It may seem to you that I was worried. I was and my attention was divided between the weather and the Persian Gulf region. As far as I knew, the US hadn't pulled the F-22s from the area, yet. They had a 20 nation action to demine the Gulf and had sent the Stennis Carrier Strike Group to the region. On the home front, that slow rain that had allowed the fescue and field crops to germinate had been the last rain we'd had.

I had loaded the irrigation pipe sections into my F-350 and hauled them to the field, stopping every little bit to unload two more sections and attach them. That took 2 days and it was hot, miserable work. Once installed, I opened the water valve on the storage tank to begin watering the soybeans.

Tammy asked me to install the garden netting and misting system as soon as I finished with the irrigation pipe. Looking everything over, I decided to forego the metering device and feed the system directly from an outside frost proof faucet. It took a long day to install the on-ground misting system and almost as long to install the 2x2s and netting. It did make a difference though; the temperature under the netting was cooler when combined with the light mist.

The gun store called and the Glock G-21SF with spare magazines was in. The CMI magazines had been delivered earlier in the week and the ammo yesterday. Since I needed to return the water meter, this was as good a time as any.

"Tammy, I have to run to town. Do you need anything?"

"Staples mostly; sugar, flour, a bag of rice and more beans."

"If you want, I can take you to the city after I return. I'm only returning the water meter and picking up the pistol."

"I'd rather go to Wal-Mart or Sam's Club if we could. They have the large bags of bread flour and have larger sizes of everything on my list."

“I should be back in an hour, 90 minutes tops.”

“I’ve thought about the concealed carry permit. I’ve decided to do it, so what’s next?”

“You take the safety class and fill out the application. The Sheriff runs the background check and issues your permit within 30 days.”

“How much?”

“The 5-year permit is \$50. I don’t remember what the safety class runs.”

“Where would I conceal the thing anyway?”

“We can order you a Galco purse. It’s going to be difficult for me to carry concealed during the summer. I haven’t quite figured that out.”

“The only people I know that carry concealed around here are law enforcement.”

“You might be surprised who has a permit, assuming the people in the safety class I took all got permits. I should be back in 90 minutes.”

“I’ll be ready.”

I returned the metering device and stopped by the gun store to get my new Glock. It was a quick trip to town and when I got back, we headed for the city about 30 miles east. We got 4 25-pound bags of bread flour, 3 10-pound bags of great northern beans, 6 8-pound bags of elbow macaroni, 10-pounds of sugar, a jar of yeast, a can of Crisco, 4 boxes of Velveeta and a 10-pound bag of long grain rice.

I got to thinking on the way to and from the city and decided what I need was a Glock G-30SF that I could carry in an ankle holster with a magazine pouch on my other ankle. When I got home, I called the gun store and he said he’d order one. How many extra magazines did I want? I told him to get me 4 more Glock 21 13-round magazines since they’d fit in the G-30SF and 1 more G-30SF magazine.

That would pretty much end the gun buying until we harvested and sold the crops. We might not have much of anything to sell, depending on the weather. I had to keep back corn and soybeans to supplement the alfalfa, assuming the crop didn’t die in the fields. I think farming is one of the biggest gambles there is. Some years it’s so wet in the spring you can barely get a crop in. Other years it no problem to get the crop in and all you have to do is pray for rain. The drought years are the worst, especially if it’s unseasonably hot.

I don’t live, eat and sleep guns, but I’m sure that Tired Old Man did. As far as my personal rifle went, I’d followed his lead. Apparently he preferred 1911s and selected the

Taurus. To get a matched set of .45s I had 2 good choices, Para Ordnance and Glock. Sixty percent of American Lawmen carried Glocks and they were less expensive than Para Ordnance and Taurus. Our 870s were marginally better than the Mossberg's but we had to settle for open rifle sights on 20" barrels and 3 round magazine extensions that a gunsmith had to install... something about dimples in the magazine tube.

"The misting system you set up for the garden seems to be working well. How is the system for the livestock working?"

"None of them have complained to me. You?"

"I don't know; I don't speak beef, pork or chicken. I assume we're done turning the farm into an armed camp?"

"Well..."

"You figured out how to conceal the Glock?"

"In a manner of speaking. They make a compact model of the G-21SF, the model G-30SF."

"And you ordered a model G-30SF."

"Yep."

"I should have bought more staples at Wal-Mart. It appears we'll be eating homemade bread and either beans and rice or goulash for quite some time."

"The next trip, we'll get several packages of macaroni and cheese."

"I can make that from melted Velveeta and elbow macaroni. We can just get more Velveeta and elbow macaroni. I ordered regular mouth lids from Canning Pantry since they sell them by the case. They're usually \$2.99 per box. If you order 60 boxes, they're discounted to 1.99 per box."

"Will that be enough?"

"We can always get more from one of the grocery stores in town or drive over to Wal-Mart."

"How long before we can get food from the garden?"

"The green onions and Bibb lettuce should be ready in 4 weeks, possibly sooner."

“So far the soybeans look good and the corn is holding its own. The alfalfa must be getting some of the irrigation water since its growing, albeit slower than usual. It’s only July 15th and we won’t know until mid-August for sure.”

“Do you have time to help with garden? There aren’t enough hours in a day for harvesting, preparation and canning.”

“Are we getting enough for full canner loads?”

“It won’t be long. From looks of the Roma tomatoes we can start picking them, blanch the skins off, remove the seeds and start the tomato sauce, with the spice mix. When it’s reduced we can add the spiced sauce to quart jars.”

“Is it time for me to add those shelves?”

“I thought you might have forgotten those.”

“I didn’t forget; I just postponed it until I knew how well the garden was doing. It’s doing a lot better than field crops.”

“The field crops are getting irrigation, what the problem?”

“It too darned hot and we’re nearing the tasseling stage.”

“It’s getting bad isn’t it?”

“I’ve got all ten fingers and toes crossed.”

“Don’t you have trouble walking and working that way?”

“A little of that goes a long way.”

“Tough.”

“If Rob can help with field harvest and Susan can help you, I think we’d be better off. He can pull the wagons of soybeans and corn when it’s time to harvest. We’ll all work on the garden until it’s time to cut and bale hay.”

“You think that old self-propelled has another year in it?”

“It could be longer. It’s been well maintained. If not, there’s that old pull combine and the mounted 2 row picker. We’ll just have to make do.”

“I can see that. But it will put a crimp in your plans Bob. We only have one tractor.”

“Then, it will just have to do double duty. When the 3 wagons are full, I’ll pull the wagons back here and unload them. Or, I could use my pickup to haul the wagons in. Theoretically we could get 3,000 bushels of corn and 1,800 bushels of soybeans. I can practically guarantee 2 cuttings of alfalfa.”

“When did you install a PTO in your pickup?”

“Oops.”

After deciding what we wanted for shelving, I went looking. It was evident that I’d have to build the shelves so I went to the lumberyard and got 2×4s and several sheets of OSB. For the sake of simplicity, I’d make shelves 2’ deep by 4’ wide and would run them from the fruit cellar wall to the opposite end of the basement and they’d run from the floor to ceiling. The lumberyard had pre-cut the shelves, for a fee.

The shelves were just far enough apart to clear a quart jar by about 2”. The bottom shelf was far enough above the floor to allow room to store food pails. Last year, Tammy bought a Country Living Mill with several accessories. She also had the feed store order in hard red and white wheat, durum wheat and soft wheat.

I’d helped her store the wheat and oats in Mylar bags which got two oxygen absorbers each and were sealed. We had 5 pails each of red and white, 8 pails of durum and 3 pails of soft wheat plus 4 pails of oats. For someone who used terms like *armed camp* she was a walking contradiction.

When she was well settled with her G-19, SR-556 and 870, we scheduled her firearms safety class and she got her concealed weapons permit. While the temperature didn’t increase at a specific rate, our hottest day came on August 15th. It hit 126° briefly that afternoon. The first cutting of hay had been cut, baled and stored. The livestock refused to move out of the misting system because with the light wind it was keeping them cool.

Between the netting and the misting system, the garden was producing 3 times as much food as we normally got and we’d only doubled the garden space. Tammy and Susan were running at least 6 canner loads a day. I had to borrow Rob to drive the tractor when it was time to pick up the bales from where the baler dropped them. I’d load a half dozen and climb on the wagon and stack them before we picked up more.

We eventually got the bales gathered and stacked under the cover. You didn’t see many hay covers in our area, that was more common in California. However Dad had the hay mow converted to a granary to store corn, oats, soybeans and mixed feed the elevator blended for us from our grain. It also made it easier to sell off a truckload or two if we had something in excess of our needs.

The temperature leveled off after August 15th, running between 98° and 105°, and dropping, for the daytime high. Had the heat held until September, we’d have lost the crops. The alfalfa continued to grow and Rob had to help me a second time gathering bales.

Tammy had to run to city to try to find more jars and lids. She didn't have any luck beyond 5 cases of quarts so she placed another order with Canning Pantry and ordered 15 additional cases. She still had more than enough lids from the case of lids she ordered because new jars came with a lid and ring.

Weather Patterns – Chapter 3

The soybeans only yielded 45 bushels per acre or a total of ~1,800 bushels. The corn always has a higher yield and we managed to get 155 bushels per acre despite the hot weather for a total of ~3,100 bushels. We also got a 3rd cutting of alfalfa but it was much smaller than our usual 3rd cutting. We had oats in the granary from last year so we were able to get several loads of feed mixed. The beans met expectations and the corn exceeded them slightly. We got what amounted to 2½ cuttings of alfalfa.

Dad had raised shorthorns but I went with Black Angus, converting over a period of time. He raised Hampshire hogs and leghorn chickens and so did I. A few people in the area raised turkeys but we didn't because of the amount of care they required. These days most turkeys were raised in large commercial operations, housed in huge buildings with barely enough room for the birds to turn around.

We were coming up on the 2012 presidential election and each day, it got a little nastier. Mitt had the biggest war chest but the president was conducting the nastiest campaign. While our County was about evenly mixed between Democrats and Republicans, every last one of them was a conservative to the core. Some claimed that our County was the most conservative County in the state.

The polls said the election was too close to call. There were two primary issues, national healthcare and the economy. This year's weather didn't figure in because God wasn't running for president and neither candidate could figure out how to blame the other for the weather.

Farmers all over the country were upset. We were one of few that irrigated in our County and I'm sure it explains why we got as much of a crop as we did. Next year would be better because we now had a well in the 2nd 80 acres. The new well was drilled deeply into the aquifer, just in case.

The 2nd well had been drilled as deeply as the 1st and if the crop the coming year was good enough, it would pay for the 3rd and 4th wells. It depended on the amount of heat we got the following year. More than one farm had been forced to plow his crop(s) under this year. Soybeans were usually the first casualty due to lack of water followed by the corn, oats and hay. And by hay, I mean alfalfa, not clover or rye grass. A significant percentage of the farmers in the area had their crops wilt in the fields due to insufficient rainfall and high heat.

This year was a good example of Mother Nature at her worst. It's happened before and can happen again. We bought insurance, from the well driller. We also bought crop insurance but didn't collect because we only planted 80, irrigated, acres. Depending on the weather forecasts for next year and Farmer's Almanac, we may skip the crop insurance and just plant 160 acres and keep the same sized garden.

Rob can help me in the fields and Susan can help Tammy in the garden and with putting up the harvest. We used all of the jars we bought and I'd imagine that Tammy will be shopping early for more jars because some will have chipped lips. I really hope she hasn't been reading any of TOM's PAW fiction, he's a strong proponent of Tattler lids and they're expensive. I just checked and his information is dated. Tattler sells in bulk packs of 500 lids with 500 rings and you can buy more bulk packed rings. I think if you go with them, you should probably spend the money to get their jar opener.

But first there was the matter of the November 6th elections. It got downright dirty towards the end. Both candidates had huge war chests. The shootings in Aurora at the Batman premier had pulled firearms into the issue briefly. Neither candidate wanted to take a firm stand on more gun control. Those of us that were part of the gun culture knew that guns didn't pull their own triggers... it was generally reserved to crackpots. Even Diane Fineswine thought it wasn't the best time to push gun control. I know it's Feinstein, but Fleataxi always said...

There is something definitely going wrong in this country and it has nothing to do with firearms *per se*. A few years back another nut case used a Katana. And, Billy Jack used a Katana in *The Master Gunfighter* (1975). And, come to think of it, he had a 12 shot revolver. Those folks in Colorado have our sympathies. He'd have done better if he'd chosen something beside a Beta-C magazine because they tend to jam.

We cast our ballots and stayed up late to get the results. The California polls didn't close until 10pm central so we gave up and went to bed. I figure Obama would carry California due to the liberals, gays and high immigrant population. We turned on the TV after breakfast to see who had won, only to learn that Florida, Ohio and one other state were still counting. MSM said the results were too close to call.

I tended to the livestock and Tammy and Susan moved the full boxes of canned produce to the shelves I'd built. Do you remember the election of 2000? Gore won the popular vote and Dubya the electoral vote. This year was about the same, Mitt won the popular vote, not by much, and Barack won the electoral vote. And, surprise, surprise, new gun laws weren't his first priority. That was the Arms Trade Treaty (ATT). Dubya's administration had voted against the treaty in 2007.

On October 14, 2009, the Obama administration announced in a statement released by Hillary Clinton and the State Department that it was overturning the position of former President George W. Bush's administration, which had opposed a proposed Arms Trade Treaty on the grounds that national controls were better. The shift in position by the US, the world's biggest arms exporter with a \$55-billion-a-year trade in conventional firearms (40 percent of the global total), led to the launching of formal negotiations at the United Nations in order to begin drafting the Arms Trade Treaty. Secretary of State Hillary Clinton said in a statement the US would support the negotiations on condition they are "under the rule of consensus decision-making needed to ensure that all countries can be held to standards that will actually improve the global situation." Clinton said

the consensus, in which every nation has an effective veto on agreements, was needed “to avoid loopholes in the treaty that can be directly exploited by those wishing to export arms irresponsibly.”

The Institute for Legislative Action, which is the lobbying arm of the National Rifle Association, voiced opposition to the treaty, writing that:

"Anti-gun treaty proponents continue to mislead the public, claiming the treaty would have no impact on American gun owners. That's a bald-faced lie. For example, the most recent draft treaty includes export/import controls that would require officials in an importing country to collect information on the 'end user' of a firearm, keep the information for 20 years, and provide the information to the country from which the gun was exported. In other words, if you bought a Beretta shotgun, you would be an 'end user' and the US government would have to keep a record of you and notify the Italian government about your purchase. That is gun registration. If the US refuses to implement this data collection on law-abiding American gun owners, other nations might be required to ban the export of firearms to the US."

Various have developed analysis on what an effective Arms Trade Treaty would look like.

It would ensure that no transfer is permitted if there is substantial risk that it is likely to:

- be used in serious violations of international human rights or humanitarian law, or acts of genocide or crimes against humanity;
- facilitate terrorist attacks, a pattern of gender-based violence, violent crime or organized crime;
- violate UN Charter obligations, including UN arms embargoes;
- be diverted from its stated recipient;
- adversely affect regional security; or
- seriously impair poverty reduction or socioeconomic development.

Loopholes would be minimized. It would include:

- all weapons—including all military, security and police arms, related equipment and ammunition, components, expertise, and production equipment;
- all types of transfer—including import, export, re-export, temporary transfer and transshipment, in the state sanctioned and commercial trade, plus transfers of technology, loans, gifts and aid; and
- all transactions—including those by dealers and brokers, and those providing technical assistance, training, transport, storage, finance and security.

It must be workable and enforceable. It must:

- provide guidelines for the treaty's full, clear implementation;

- ensure transparency—including full annual reports of national arms transfers;
- have an effective mechanism to monitor compliance;
- ensure accountability—with provisions for adjudication, dispute settlement and sanctions;
- include a comprehensive framework for international cooperation and assistance.

If the ATT isn't a new gun law, I can't think of how else to classify it. I sold what grain we could spare and picked up an SR-556, an M1A Loaded, 2 Mossberg 590A1 SPXs, 1 Glock G-19s and another Glock G-21SF. I added 4 very expensive .308 50-round drum magazines I got from X-products dot com. I was thinking of perhaps getting 4 of the 5.56 magazines if they had one to fit the Rugers. We now had 2 sets, *his* and *hers*.

Winter is that time of year will you'll find a lot of the farmers in town in a beer joint, playing cards for want of something to do. I/we didn't do that because of the amount of chores that needed doing on an ongoing basis. The manure spreader was parked near a barn door and I kept the barn clean, shoveling it out every day when the livestock was turned out. That happened as soon as I had the four cows milked. After taking out what we'd use, I haul milk to town to be turned into ice cream.

In the same vein, for every scoop of manure I hauled to the spreader, I had to dispense the mixed feed from the granary and fill the feed boxes. I picked up the new Farmer's Almanac and next year looked to be better with temperatures forecast at least 10°-15° cooler and much more rain. The proof would be in the outcome and we were fully prepared to irrigate 160 acres and add the 2 additional wells to bring all 310 acres under cultivation the following year.

Every cloud has a silver lining and in this case it meant that the shortage of grain had forced the prices to record levels. That's how we were able to buy Susan and Rob firearms for Christmas. Naturally, Tammy didn't agree with my choices and bought the kids' clothing. They were too old for Tonka Dump Trucks and Barbie dolls anyway.

In Syria, al-Assad had used chemical weapons against his population, contrary to Russia's warning. Russia imposed an immediate arms embargo against Syria and Iran since a major portion of the Syrian arms were bought by Iran on Syria's behalf. The embargo also included the Russian S-300. Iran had reverse engineered the C-802, increasing the range to 130km. They no longer needed the Chinese missile. Furthermore, Iran had managed to convert several of the S-300s to the S-400s which Russia wouldn't export.

Israel has been issuing gas masks to its population since 2010, but only the mask, filters and drinking tube. They would be of little use against chemical weapons, especially nerve gas.

Nikolai Fyodorov, the minister, revised the official forecast for grain production in 2012 to 80m tonnes from an earlier 80m to 85m tonnes. Fyodorov's comments came as no

surprise. Fears of a poor Russian harvest have been stoking a six week rally on world grain markets initially caused by an abnormal drought in the US Midwest and poor crops elsewhere.

Other forecasters are more pessimistic, suggesting the ministry might have underestimated the problems besetting Russian grain farms. Only last week Russia's state weather service said the grain crop would be 77m to 80m tonnes this year and warned that the "situation was bad".

SovEcon, a Moscow-based independent farming consultancy, was preparing this week to cut its forecast for the second time in a month.

"It's likely to be 78m tonnes or less," Andrei Sizov Jr., managing director, told beyondbrics.

He was right; the actual Russian grain harvest was down to ~77 million tonnes. Those are metric tonnes, which are 2,200 pounds per ton. That's 84.7 million tons by our standards. The US had no grain to export and Russia embargoed their exports to a few million tonnes.

If that wasn't bad enough, Chevron had been ordered by a court to stop drilling off Brazil and the day before Shell Oil Co. said it was downsizing its plan for off-shore drilling in the Arctic this year amid delays completing a spill containment barge required by the federal government.

Starving people and a shortage of petroleum, and thereby reduced travel, could lead to a war. The problems with the oil were strictly environmental as were the food shortages. We didn't need both to happen at the same time. I started to worry and thought about our storm shelter. There was barely enough room to turn around in the one we had and if something really bad happened, we'd be up the creek.

For want of something to do, I began to design what would be an underground shelter connected to the basement with a tunnel. I was getting my ideas from American Safe Rooms based on TOM's and Jerry's stories. TOM had started off favoring Utah Shelter Systems but changed when Jerry brought up American Safe Rooms. They were less expensive and money was tight. On the plus side was the fact that I'd laid block a couple of summers in High School after two summers of being a gopher.

We'd have to buy the cement, sand, aggregate and rebar to pour a foundation and floors. Then, we'd have to buy block, mortar and rebar to erect the walls. By the time I had it priced out, it was almost as economical to have Allied Redi Mix pour concrete with fiberglass strengthener and an accelerator. On top of that, preformed concrete pedestrian passageways were not much more than block and concrete and stronger with their arched tops.

I decided on 8" thick walls 9' high in case I changed my mind about the blast door. The blast door Utah Shelter Systems sold required a 10" thick wall. I was going to have to finance the project and decided to call it a *home addition*. I'd banked with First Security for years and since I had a crop this year and expected to double it next year, went to talk to them about a loan for my *home addition*.

Although there were only the 4 of us, I discussed the size with Tammy. It didn't go well.

"Are you out of your mind?"

"Not really. Consider if you will the reduced harvest this year. That's been global. Russia only brought in a harvest of about 77 million metric tonnes of grain and they're exporting only a few million metric tonnes. Then Chevron and Shell have those drilling problems on top of a food shortage. It could mean war and any fallout would be from Cheyenne, Wyoming. I'd rather be prepared."

"Is that what is behind you buying the firearms?"

"Only partially. We have some food stored plus the various grains in the pails. You should order more wheat and we should load up on beans, rice and other staples. If we can't get something, we can order from Nitro-Pak or Emergency Essentials."

"Why not Walton Feed?"

"They changed their name to Rainy Day Foods but they take forever and a day to ship large orders. We can get anything they sell from Nitro-Pak or Emergency Essentials. I plan to get a home improvement loan to pay for the shelter and stock it. That will include a large diesel tank and an Onan 12.5kw Quiet Diesel generator."

"Will that put out enough power?"

"Sure, it puts out 104 amps at 500' elevation and our elevation is around 1,000'. We have to derate it about 2% so it should put out 102 amps. We won't have to derate it due to temperature since it will be underground."

"Fuel?"

"Biodiesel is available from B-20 to B-100. We'll have to use biodiesel and have Cummins/Onan tune the engine to run on B-100. We can stabilize the fuel with PRI-D and add either an anti-gel or kerosene."

"Who are you going to use for the loan?"

"First Security. Even if we have to pledge the entire farm, I believe it will be worth it."

“I’ll get busy on a supply list and as soon as you have the money, place the orders. How much food do you think we should get?”

“Enough for 4 people for 3 years. Check for MREs at Nitro-Pak. TOM mentioned them in his latest story. I think he called them Hungry Man and they’re a Nitro-Pak exclusive. You might check on the Mountain House freeze dried entrees, sides and desserts while you’re at it. How large is our supply of home canned goods?”

“We have a 2 year supply of canned garden produce and would only really need to grow potatoes. If you’re serious about this, I’d better start stocking up on Folgers, Bigelow tea and Swiss Miss.”

“Why don’t you check out the stuff online and I will get the building proposal submitted to the bank?”

“Fair enough, looking doesn’t cost anything. How large will it be?”

“Thirty-six feet square or 1,296ft² plus the tunnel and the generator room.”

Weather Patterns – Chapter 4

“What can I do for you today Bob?”

“We’re looking for a home improvement loan. The farm’s paid for and we’re prepared to mortgage any portion necessary to do the improvements.”

“I think you’re one of the few that actually got a crop this year. How did you manage that?”

“We have a 4” irrigation well on one of our 80 acre fields and added another well to a second 80 this year. Farmer’s Almanac is forecasting cooler temps and more rain next year.”

“How much are we talking about?”

“To accomplish what Tammy and I want will run in the neighborhood of fifty thousand, possibly more.”

“What kind of improvements?”

“An underground storm shelter connected to the basement via a tunnel with a second egress in case the house falls into the basement.”

“We already had a tornado back in 1968.”

“That doesn’t mean we can’t have another.”

“I suppose not. Do you have a set of building plans?”

“Right here.”

“I’ll look them over and submit them to the loan committee. How soon would you want to start construction?”

“We’d like to get the excavation done before the ground freezes.”

“I’ll call you if we need more information.”

“Thank you.”

A week later the banker called back and wanted to see me in his office.

“Bob, the loan committee approved your loan application with stipulations. First, they don’t believe your estimate of fifty thousand dollars was accurate and feel you’ll need at

least seventy-five thousand. They'll grant you a line of credit for a maximum of one-hundred thousand with your half section as security. One committee member said that since you're building a bomb shelter, you should do it right and install that tunnel as an airlock with the Swiss Blast door in your basement and the American Safe Rooms blast door entering the shelter with the American Safe Rooms blast hatch as your emergency exit. They also suggested you get at least a 15,000 gallon tank for the biodiesel. You can draw against the line of credit in ten thousand dollar increments. Sign here, here and here."

I had to get the building plans approved by the County and get a building permit. The first Phase was excavating the areas for the tunnel, generator room and shelter. The generator room would be built off the tunnel to limit the noise. Allied brought in a construction crew and formed up the foundations after they had the septic tank and water tank installed below floor level along with the various plumbing pipes and a gas line. They used 5,000 psi concrete with fiberglass and an accelerator. They pulled the forms 3 days later having raised the 8' forms for the walls with OSB and 2x4s to add the additional foot.

The door from Switzerland arrived just in time and they set it in place before pouring the new section of basement wall. They used solid concrete blocks and added the ceiling support pillars. With those in place, they formed the 8" roof which matched the 8" floor and 8" walls. They had the decontamination shower head installed through the pedestrian archway nearest the ASR blast door. The drain had been installed and connected to the under floor septic before they poured the floor. Next, we sat back and waited for the concrete to harden. The QD 12.5 was in the generator room before they poured the roof because it would be difficult to move. It wasn't that it wouldn't fit through the door, it was heavy (660 pounds) and awkward at 24"wx41½"l x 27"h.

It was going to be hard enough to get the drums of motor oil into the basement and from there to the generator room. There was room for a set of shelves holding generator supplies and two 55 drums. One was empty and the other was filled with 15w-40 Castrol. Yes, that's what TOM suggested.

We had the used double wall fiberglass diesel tank installed in March and began to get B-100 deliveries as fast as our producer could deliver 3,000-gallon loads. They did the American Safe Rooms blast door and hatch along with the various valves and fittings and the Safe Cell after the concrete was safe to walk on. The volume of the shelter was $1,296\text{ft}^2 \times 9' = 11,664\text{ft}^3$ and the ASR-100-AV-NBC Safe Cell was rated at 235 cubic feet per minute unfiltered and 60 cubic feet per minute filtered. It would provide a complete air exchange every 3¼ hours.

The air for the generator was pumped from an overpressure valve into the generator room and the generator exhaust through a pipe above ground. A second overpressure valve was installed in the generator room to release extra air. We added a 4 in 1 kitchen and small electric water heater to the shelter.

We essentially had it finished before spring planting rolled around. There were 2 $\frac{3}{4}$ -baths, one large and two smaller bedrooms plus a storage room in the shelter. The fire-arms were stored in a locked gun rack in the storage room along with the ammo and food supplies. Water came straight from the well. Sewage flowed into a single tank with a sewage pump that pumped it up to the septic tank inlet, which now supported a wye adapter.

We had used sixty-thousand of the credit line with another forty-thousand available. This year, I intended on planting 40 acres of alfalfa, 40 of corn, 40 of soybeans and 40 acres of oats. We could use the line of credit to get the final two irrigation wells drilled, which would have us ready for come what may.

I didn't tune in his second inaugural address because he'd just make more promises he couldn't keep. As long as Congress remained a house divided he wouldn't get even the most trivial legislation passed. It appeared to be politics at its very worst. And, because of state of the Congress, even the Postal Service couldn't meet its pension and healthcare payments.

Cities were going bankrupt left and right, especially in California. Farmers across the Midwest were in an even worse state. At least our bank wasn't at risk of losing the money they loaned me; not with 320 acres at \$5,500 an acre insuring the loan (\$1,760,000).

The garden this year would be the same size as last year and that meant buying Mason jars, and eventually, Tattler lids. This year Tammy announced they were adding applesauce to enhance the amounts of fruit Susan and she were canning. I suggested pumpkin as a second baking ingredient. She was game and suggested getting several flats of Bing cherries to can for cherry pie filling.

Due to having a substantial portion of the line of credit open, Tammy ordered 144 cases of quarts and 36 cases of pints plus a bulk packed triple order of regular mouth Tattler lids and rings and a second lid opener. I'd spread manure over the garden spot and plowed it under during the late fall, covering it with a winter rye/fescue mix. I tilled that first so I could stay in the fields prepping and planting the field crops.

We were all looking forward to eating the beefsteak tomatoes. We butchered a market weight beef and two hogs. Both hogs had the hams, picnics and bacon brined and smoked including the two loins from one hog for Canadian bacon. We got 8 half racks of back ribs and 2 loins worth of boneless pork chops. The tenderloins were made into breaded pork tenderloins. Almost everything else went into American flavored sausage. I don't care for Italian sausage.

Another portion of the remaining funds was used to buy the irrigation pipes for the other 3 fields. One section was installed in the second 80 with the last two stored for the following year. Rob and I set up the misting systems for the livestock and garden. I wasn't sure we'd need it because of the weather predictions made by the Farmer's Almanac.

I don't believe that it's possible to be over prepared as long as you have a source of funds. Reading the PAW fiction was entertaining and educational. We discovered, for example, the benefits of personal protective gear and placed an order with Approved Gas Masks for the masks, suits, boots, tape and gloves together with 4 cases of extra CBRN filters. The masks were the MSA Millennium Gas Masks. Because none of us wore beards, we didn't require the MSA OptimAir 6A PAPR. We did, however purchase M8 gas test strips.

We wanted 5,000 rounds of ammo per rifle, 1,000 carry rounds for each pistol with double that number of practice rounds. Shotgun ammo would include one case each of slugs, 00, #4 buck plus #2, #4 and #6 shot for hunting or 1,500 rounds per shotgun. It looked like the bill to severely limit mail order/internet sales of ammo had a chance of passing so we filled the holes and upped the rifle ammo to 6,000 rounds per so we had practice ammo equal to what we normally used in the rifles.

We had more rain this year. It was well below average annual rainfall and we ended up irrigating part of the time. The temperatures were lower, with daytime highs running between 95° - 105° F. The humidity was running between 70% - 80% most of the time. We practiced low tillage to preserve the moisture in the soil. We had fine crops, getting 3 full cuttings of hay, ~160 bushes/acre (b/a) on the corn, 55 b/a on the soybeans and 75 b/a on the oats.

The amount of grain exceeded our storage capacity and with the increased production everyone received, we lay out plastic sheeting and piled the grain doing our best to wait out the *glut*. We used the last of the old oats, corn and soybeans to blend our livestock feed. Once the bins in the loft were empty, we augered all the grain we could up to the granary.

It didn't take long for the prices to return to their previous levels and we sold all of the remaining excess grain. That money went a long way towards reducing our debt. I'd gotten a bug up my butt about the new McMillan TAC-50A1R2. So, late in 2013, I took the plunge and discussed it with Tammy. Is there a term for less than ecstatic?

The rifle ran \$9,999 so call it 10 grand. It came with 2 magazines and extras cost \$390 each. The McCann Night Vision Rail ran \$260, the Elite Iron Suppressor \$1,475, scope upgrade to 12-42x56 NXS Nightforce \$50, 8 extra magazines \$3,120. Grand total \$14,905... not counting the Hornady A-MAX match at ~\$5+ per round including shipping. Our state prohibits all NFA firearms and getting the suppressor would be a problem, so reduce the total to \$13,430 plus ammo. Oops, forgot the night vision, another \$10,200. There was no way I'd spend that kind of money on a rifle even if it would reach the moon.

It was essentially the same reasoning I'd used to talk myself out of the M1A Super Match. It was more accurate than the National Match and the Loaded was a National Match absent a few features. Another 100-200 meters of range wasn't worth the differ-

ence in price. Besides, they didn't sell what I would have bought, a Douglas 1:10 chrome moly parkerized barrel in a black McMillan adjustable M3A stock with the elevator mechanism.

Instead, we looked over our supplies and bought more food with an emphasis on staples. Staples are generally defined as: corn, rice, wheat, potato, cassava (basis for tapioca), soybean, sweet potato, sorghum, yam and plantain (banana). We grew corn, soybeans and oats and bought wheat by the bag to store in pails. We defined staples as spices, baking powder and soda, coffee, tea, cocoa, rice, beans, toilet paper, feminine hygiene, etc. In other words manufactured goods and food we didn't produce locally. By the time we finished shopping, we were set for years on staples. Don't believe Emeril, spices don't go bad until you open the package.

Sometime last year, August I think, DEBKAF had a discussion about Israel, the US, Iran and Saudi Arabia. Apparently, Bibi was pushing for an October action against Iran because they were now producing 60% enriched uranium, bomb materials. Grand Ayatollah Sayyed Ali Hosseini Khamenei was getting old (73) and the Saudis expressed concern over his successor. However, the Saudis wanted the US to attack Iran before Israel did, apparently to avoid the other Islamic countries from having an excuse to attack Israel. Obviously the US didn't invade Iran and just as obviously neither did Israel. I wonder what Barack promised Bibi.

With that second well in, I ran some water to soften the 2nd 80 and when it came time for fall plowing, I plowed all 160 acres after spreading the accumulated manure. With some of the last of the money, we got the last 2 wells drilled. When they came in, we changed our plans and decided to plant 40 acres of alfalfa, 120 of corn, 80 of soybeans and 70 acres of oats (the missing 10 acres are the homestead).

There hadn't been any mention in the media about the Navy moving the Carrier Strike Groups. Assad was still doing his worst to kill off the rebels in Syria and Russia still had a fleet in the Med standing off Syria. The first we'd heard of it was listening to Shep Smith doing a live feed from an unnamed Carrier in the Persian Gulf. There were 3 additional Strike Groups plus those large amphibious ships the Navy uses to move Marines. Two Strike Groups were in the Med, well within flying distance of the Russians. The other 4 were deployed in the Far East, Yellow Sea, Sea of Japan and 2 in the East China Sea near Taiwan.

The keel of the Gerald R. Ford was laid down on 13 November 2009. Construction began on 11 August 2005, when Northrop Grumman held a ceremonial steel cut for a 15-ton plate that will form part of a side shell unit of the carrier. The schedule calls for the ship to join the US Navy's fleet in 2015. Gerald R. Ford is slated to replace the current USS Enterprise, ending her then 50-plus years of active service with the United States Navy.

Obama, with consent of Congress had fast forwarded the construction of CVN-78. As of August 2011, the carrier was reported to be approximately *half completed*. In April 2012, it was said to be *75 percent complete*. On May 24, 2012, the important mile-stone of completing the vessel up to the waterline was reached when the critical lower bow was lifted into place. This was the 390th of the nearly 500 lifts of the integral modular components (from which the vessel is assembled) that the ship's construction will ultimately require. The island is scheduled to "land" in 2012. It is scheduled for launch (i.e.: Christening) in 2013 with delivery in 2015.

It had been christened a few months early and the Chairman of the Joint Chiefs announced that it would be commissioned sometime in the next 12-15 months. He also announced that the ship would be equipped with F/A18E/F Super Hornets and F35C Lightning II JSFs. Since the Enterprise wouldn't be retired until after the Ford was commissioned, we would have 12 Carrier Strike Groups available within 12-15 months. It was surprising but not unheard of; the Lincoln (CVN-72) had gone from launch to commissioning in 18+ months. From her keel being laid down to commissioning had taken 5 years and a few days.

Could it be that it was one of the ways he had created more jobs?

While many of us didn't view Obama as a decisive president, he had ordered bin Laden taken out and was doing his best (worst?) at standing up to Russia, China and Israel. Open microphones notwithstanding. Dubya was true to his word and didn't criticize the job Obama was doing. Say, does he still have that ranch in Paraguay? As I understand it, he went through a middleman, his daughter Jenna.

Back to the matter at hand, the Carriers. We had 10 of the 11 deployed and the 12th would be coming on line soon, but the Enterprise would be decommissioned. There was a push on to get as many of the A, B and C model Lightning IIs completed as possible in the short term.

Frankly I was more worried about the fields being ready to plant. Because the 2 wells we put in early we could farm all 310 acres, not counting the garden. I was on pins and needles until we got the crops in and Tammy and Susan had the garden in using those extra heirloom seeds Tammy got from Janice.

Once the garden sprouted, I had Rob make a pass through with the Troy built and Susan followed along behind hoeing the rows. The misting system for the garden went in first followed by the livestock misting system. Now we were worried we might not get everything harvested before things went south in the Middle East.

Bibi was raising holy hell about Iran, the Saudis were urging the US to strike first, Russia had a fleet in the Med to prevent that, Michael Phelps had a record number of Olympics wins, Kim Jong-Un's wife was pregnant and... Congress passed the mail order ammo bill. With the election over Fineswine, Boxer, the Brady bunch and others were back to pushing for a renewal of the Assault Weapons Ban. Plus the Farmer's Al-

manac was reporting near normal temperatures and adequate rainfall. Situation normal... FUBAR.

"We got a letter from the bank reminding us that the payment on the loan was due when the crops are sold this year."

"That shouldn't be a problem with the amounts of land we'll have under cultivation this year. Corn will be down some but I'm estimating around 20,000 bushels. Even if the price drops we can pay off the loan. We may not even need to irrigate, but can if it's necessary."

"We'll need Rob to help with the garden."

"After the planting is done and before we cut hay we can both lend a hand. I'm going with low till again this year on the corn and beans."

"I got a deal on some radios."

"Portables?"

"Yeah, Oregon Scientific WR-602. I bought four and everyone can have one at hand 24/7."

"That brings up a thought. In all the PAW stories the principal character has Ham radios. Have we given that any thought?"

"Susan took the tests and has an extra class license. Rob has his general and is working on his extra class. The equipment isn't really what you'd call inexpensive. Plus we'd need an antenna tower. All we have at the moment is the CBs."

"I wonder if we should get portables."

"We have the four Cobra AM/SSB 148 GTLs with two installed plus two put up in addition to the Galaxy DX2547 AM/SSB CB Base Radio. The Wilson 5000 series are good mobile antennas. Let's face it; a CB mobile is 12 mile radio. They're fine for the farm but if you want more range Bob, we'll have to go to business band. Susan has her eye on a Kenwood TS-2000.

"Susan also has her driver's license and wants a car. I told her I'd talk to you and we might consider getting her a good used car."

"We might just pay half the remaining balance on the line of credit and get the car and communications equipment. I suppose she wants a tower."

“Either that or a utility pole. She was looking at both verticals and beams. We’d get a little more range out of the CBs if the base station antenna was higher and if push comes to shove, we can use the linears.”

Weather Patterns – Chapter 5

Over the course of the summer of '14, I visited with Susan about what she might want in a car, the radios, antennas, etc. She wanted a used diesel pickup sans engine computers. She sort of had her heart set on a Kenwood TS-2000 radio and would settle for a 10 band vertical but really wanted a rotor for a set of HF, VHF and UHF beams. I checked with MidAmerican Energy and the tall utility pole was expensive. It was also much less expensive than a tower, about 20% of the cost of the tower.

I had to add more shelving because we were putting up more garden produce than we were eating. Have we been using boiling water canners, I'd have been concerned about the food going bad. Tammy was using a pair of All American 30 quart canners and was putting various staples in cans using an All American can sealer with a variety of heads.

We could justify the cost of the communications gear as improving our state of preparedness. Vehicles don't wear out as much as they rust out here due to the salt the Highway Department uses on the roads. Finding a used diesel pickup sans computers would be more difficult. We could do it all for ~\$15 thousand. Tammy ordered the antennas, rotor and radios. Susan I went pickup shopping. When we had the buying done, I ordered the utility pole, with installation.

One of the guys on the crew was a Ham and he got the rotor installed along with 4"x6"x14' standoffs for business band, CB and a Discone with a fourth unused. Part of the cost was the CM 300 and CP 200 radios and the license. We bought five of the CM300s and ten of the CP 200s. My pickup and Tammy's car had radios running out the ears! Susan hinted that we forget to get her a 2 meter/70 centimeter mobile. Well, why not, Christmas was coming and I speculated she'd rather have a TS-2000 in her pickup.

The last of our troops were out of Afghanistan by Thanksgiving. Bibi made a trip to Washington to talk to Obama but what they discussed wasn't revealed beyond the fact that they'd reached an understanding. CVN-78 was doing sea trials. When the sea trials were completed, she was stationed at Pearl Harbor. Israel actually had 2 stealth fighters, the F-35I and what looked to be a copy of the YF-23. That was the aircraft developed by Northrup-McDonald Douglas that lost out to the YF-22. The F-22s still had mostly resolved (oxygen) problems.

The summer of '14 had started off just fine. We had enough rain early on and everything came up. And then, it got hot and dry like back in '12. We had the wells and got a good crop while those who couldn't irrigate watched their crops burn up in the fields. There were huge grain shortages in the US, less so in Russia... they irrigated. We got top dollar for our crops and despite blowing ~\$17 grand on the pickup and comms, paid off the bank line of credit. A line of credit is great, but the interest rate is higher.

The deal that Barack and Bibi worked out was that the US would attack Iran using conventional weapons while Israel attacked Syrian Army and Air Forces, again using conventional weapons. While the US waged an air campaign, Israel went through the Golan Heights and into Damascus. From there, they began to push the Syrian Army and Air Force north towards Aleppo.

The Syrians used chemical weapons against the Israelis. Chemical weapons are Weapons of Mass Destruction and that let Israel deliver their own Weapons of Mass Destruction, built in Dimona, using the F-23s they didn't have and no one could pick up on radar. Russia assumed Israel attacked Syria first and reacted.

The 2 Carrier Strike Groups the US had in the Med had the Russians outclassed and outnumbered. The Russians withdrew their Fleet. When their fleet was clear, they launched on Israel. Israel launched Jericho III missiles right back at them; MIRV'd no less. Russia had to hold missiles in reserve, assuming if they attacked Israel, the US would attack them. Our Minuteman III missiles were at 2 minutes and holding while satellites assessed the damage to Russia and Israel. Since Israel is a small country and Russia rather large, the assessment was Israel took it on the chin. Obama released the Minutemen. All 450 were targeted on Russian targets and some were still MIRV'd.

We had been watching TV, it being early evening, hoping for an update from Shep Smith who seemed to be detained on the carrier he was embedded on. He was reporting Iranian missiles headed towards Israel, but quickly said the Israelis had intercepted all of them. Apparently he was unaware Israel launched on Iran and bombed Syria and Russia launched on Israel and Israel retaliated. CNN was carrying a live feed from Tel Aviv and suddenly went off the air amidst blowing sirens.

Our radios sounded and the TV changed to an EAS message. Obama said to take cover because we were retaliating against Russia for their strike on Israel. I headed to the barn to close it up and stack the straw bales in front of the doors. Rob came along to help. Tammy and Susan started emptying the refrigerator into the shelter refrigerator. The freezer was kept in the shelter despite the inconvenience.

We had a large amount of straw from the oats crop and on a whim, I'd stacked it 3 layers deep around the barn and up on the roof. Since we'd only sold off enough grain to pay off the bank and buy a little junk silver, the granary was full. We'd used blue tarps to cover the straw to protect it from the winter weather. We're hot and humid in the summer, cold, dry and windy in the winter with a fair amount of snow.

We had the Package from KI4U plus a CD V-717 remote survey meter. It was about 30 minutes before we lost power and the QD 12.5 kicked in. We couldn't hear it but the lights went out for a little bit and then came back on. I went to the generator room and confirmed it was running.

Russia had attacked Pearl Harbor in a counterforce action but the Ford Carrier Strike Group was at sea with 2 Cruisers, 3 Destroyers, 1 Frigate, 2 subs and assorted other

MSC ships. The Military Sealift Command operates 116 ships that are manned by civilians with only a few military aboard. The ships are property of the USN.

We got very little radioactive fallout. Russia had hit primarily countervalue targets. Susan was on her radio as soon as we were convinced the likelihood of HEMP or EMP was extremely low. Strikes were made against Washington, the fifty state capitals and the largest 100+ cities which weren't included in the first 51. What little radiation we did register probably came from Denver or Cheyenne.

Susan disconnected and grounded her Kenwood when she wasn't listening to it. It was well she did, China may have been a latecomer to the party, but we hadn't hit them and eventually they launched everything they had against the US.

We speculated they used satellite intelligence to determine which targets deserved a follow-up. We further speculated that they didn't find (m)any because they selected geological targets, primarily volcanoes and the two major fault zones, San Andreas and New Madrid. The Cascade Range in the Pacific Northwest has the most active volcanoes in the country and Susan heard that each was hit with one or more warheads. We think they hit Yellowstone with 3 separate 2-5mT warheads at intervals. That's only a guess. Whatever they used, it was enough to trigger the Supervolcano.

New Madrid, Missouri took another of their large warheads triggering Reelfoot Rift. The attack against the San Andreas either missed the targets or weren't powerful enough to cause more than several 6.5–7.0 M_w earthquakes. Los Angeles was already devastated so we think that the quakes didn't do much damage there. A Ham from Lancaster, California later reported that Palmdale was nearly wiped out.

When the outside radiation level was below 0.050 R/hr, we came out of the shelter with the intention of staying out. We'd been forced to make brief forays to feed and water the livestock. Had we been thinking, we'd have run a tunnel from the shelter to the barn. Satisfied that everything was copasetic here on the farm, we armed ourselves and headed to town to see how they made out.

However, there were few people out and about in town and the few we saw were armed with firearms ranging from .22s to shotguns. Vehicles were operating answering the question about HEMP or EMP; we obviously hadn't received any. A local cop carrying his shotgun saw me and flagged me down. I was thinking I was in trouble for openly carrying the M1A. It wasn't that, he told me that the Sheriff wanted to talk to all of the farmers in the area. He suggested leaving the rifle in the pickup when I saw the Sheriff.

"Sheriff, a cop told me you wanted to see me."

"You're..."

"Bob Benton. We farm southwest of town."

“Right. Ok, we have a problem. We’re getting some fuel but no food. My office is asking all the local farmers if they have any corn, oats or soybeans they can spare to feed the folks here in town. You’ll get paid, eventually; but, at the moment it would have to be on trust.”

“We have some of all three in the granary. How much were you asking for?”

“How much can you spare?”

“A wagon load of each?”

“It would sure help.”

“We’ve had a large garden the last three years and canned about double of what we can eat. We’ve been eating it on a first-in, first-out basis and the freshest hasn’t been touched. Would 500 quarts or so of canned produce help?”

“It would help. Five thousand would help more.”

“Sorry, don’t have that much. You’d have to set up a soup kitchen in the High School Auditorium or something.”

“What do you plan to plant?”

“Corn, oats, soybeans and alfalfa.”

“Don’t suppose you could plan a few acres in vegetables?”

“Maybe. We’re using heirloom seed so we have more seed than average, but not enough for a really large garden like you’re suggesting. A large garden would require more labor than the four of us could provide.”

“The folks here will provide the labor, but what about the weather? Farmers have been going broke left and right.”

“We irrigate.”

“Nobody in this area irrigates.”

“I’m not going to argue with you Sheriff, but we irrigate. We did 80 acres in ‘12, 160 in ‘13, got a bank loan and actually put in 2 more wells. We farmed 310 acres this past year.”

“If we could provide the labor and seed, could you provide the acreage?”

“Can’t use heirloom seeds and hybrid seeds near each other; they can cross pollinate.”

“And, if we can get heirloom seeds?”

“Ask Janice, she has some.”

“Janice who?”

“Janice Welton.”

“Assuming we can get heirloom seeds?”

“You can use as much land as you have seeds for, weather permitting.”

“What do you mean weather permitting?”

“Weather has patterns. We already know about volcanic winter because of the Toba Catastrophe Theory which resulted from the eruption of Mt. Toba roughly 75,000 years ago. It’s been suggested that the subsequent volcanic winter reduced the human population to 10,000 breeding pairs and possibly as few as 1,000 breeding pairs, creating a bottleneck in human evolution.

“You may recall that the Santorini eruption wiped out the Minoan civilization. That eruption occurred between 1627 BCE and 1600 BCE. Then when Mt. Vesuvius erupted back in 79AD, it wiped out Pompeii and the Mount Tambora volcanic eruption of 1815 caused *The Year without a Summer*, 1816. Now when Krakatau exploded in 1883, it killed from 40,000 to 120,000... estimates vary. It was bad, but not on the scale of Toba. Mt. Etna seems to erupt on a rather regular basis causing all kinds of problems in the Mediterranean.

“Maybe we got lucky and China ran out of rockets before they hit Cumbre Vieja on La Palma Island in the Canary Island chain. If Wiki was still up Sheriff, you could research how some of what I mentioned is interrelated. We’ve had quite a bit of ash and I have serious doubts we’ve seen the last of it considering the Pacific Ring of Fire. It’s colder than normal for this time of year, if you haven’t noticed. Or, do you usually wear a heavy coat in June?”

“Three years ago you could fry an egg on the hood of your car.”

“Well, that was then and this is now. The soil is good and we have water. What we will need is sunshine and heat or there won’t be a crop. By the way, be sure to wear good sunglasses even though there isn’t much sunshine.”

“Why?”

“Ultraviolet A and B can cook you. Wide brimmed hats would be a good idea too. Never mind, you wear those County Mountie hats. Before we bring that grain in, let me ask you something. Did you empty out the elevators up on North Main Street yet?”

“Damn!”

“Look in the Yellow Pages, there are a total of 47 elevator locations in the area. We’ll hang onto our grain for now. If you get the seeds, the sky clears and it warms up, come see us and we’ll plant a garden.”

Despite the ash lingering in the air and the very cool, almost cold June climate, we plowed the fields and had them ready to plant. We didn’t have enough manure to cover all the fields so we did the soybean and corn fields. We didn’t plant, that would have to wait.

Weather Patterns – Chapter 6

It was either TOM or Jerry or both that said never volunteer. I'll go with TOM. Just because I started to volunteer didn't mean I had to stop thinking of a way to un-volunteer. There had to be some grain in the elevators since some farmers practically sold it out of the field to get cash to cover their expenses. The elevator wouldn't have had time to move all of the corn, oats and soybeans before the war. By changing the subject the way I had, he'd forgotten all about the canned goods.

Maybe we could stash a portion of what we had and I could tell him I'd over estimated what we had when I'd talked to him about it. We're not opposed to helping out, but I said 500 and he'd made it 5,000.

"Rob, I have a job for you."

"Yes sir."

"Go around to the backside of the hay pile and un-pile five rows down and six rows deep by five bales wide"

"What for?"

"We're going to create a place to store our extra canned goods."

"Why?"

"How about because I say so."

"Oh. Ok."

"Hang on; I'll help you get started. I'll toss some down and you stack them out of the way."

What happen is humorous when I look back on it. I got caught up in tossing the bales down and Rob stacking them and before I knew it, I'd moved all the bales I'd intended to move. We got the 2 wheel utility cart and the larger appliance cart and started moving the newest canned goods to the hay pile, 8 cases at a time. We stopped every few trips for a short break because it was tiring moving the cases upstairs a cart load at a time as opposed to moving them downstairs a case at a time.

We stopped for a sandwich after moving 24 cases. Tammy was giving us a strange look and shaking her head. I knew I would end up explaining before bedtime. After the sandwich and bathroom break, we moved another 24 cases. That only left 48 cases to move. We took another break and returned to move 24 additional cases. One last break and we moved the last 24 cases. We didn't have to use as much hay to restack on the hay pile and could spread the remaining bales along that side of the pile, tomorrow.

“How many cases did the two of you two move and why?”

“Ninety-six cases of the most recently canned food, 1,152 quarts. Sheriff Lynch wanted all the grain we could spare despite the amount in the elevator towers on North Main Street. I offered 500 quarts of canned produce and he wanted 5,000. Rob and I moved the 96 cases in case he comes looking.”

“That’s not very charitable of you.”

“Let ‘em eat cake. The area received negligible amounts of fallout. I didn’t see most of the residents, however. I’m not sure that will last long unless the Sheriff starts collecting home canned food. We’ve managed to keep a fairly low profile despite having Allied construct the shelter. The worst case scenario is someone tells the Sheriff and he seizes what food we have in the shelter.”

“What about the LTS foods?”

“We’ll put most of it in the granary tomorrow. We can push down those extra sheets of OSB and create the walls for a room. Then we can shovel out the grain and fill the space with the majority of LTS foods. Finally, we can top it with another sheet of OSB and cover that with grain.”

“That’s going to be a lot of work.”

“Maybe we’ll use the auger to move the grain and move and stack the LTS foods while we empty the space. Two days tops.”

“Do you plan on increasing the size of the garden?”

“Yes, we can double it to four times the original size and sell fresh produce to the grocery stores. The folks in town will have to can their own food.”

“How come you’re taking such a hard line on this? We could probably feed the entire town if we got enough volunteer labor.”

“Attitude. The Sheriff as much as insisted we had an obligation to feed the town. There are hundreds of farms in the County and as far as I’m concerned, everyone pitches in or we don’t help more than we choose. We can always freeze some of the produce if we run out of jars.”

That was the quandary, Mason Jars, or the lack thereof. By making the garden 4 times its original size, the leftover 148 cases of quarts and 24 cases of pints wouldn’t stretch. We decided to go door to door asking for empty quarts and pints. There are a lot of doors in town and many people didn’t want to be bothered looking in their basements or garages for empty jars. We persevered and eventually brought home several pickup

loads of jars. We passed on the lids because most were long expired. But we had what seemed like a limited number (3,000) of Tattler lids and rings (3,500).

The next day we picked up 10 sheets of OSB and had two sheets cut into a pair of 4x4 slabs. We had better luck getting the boxes built in the oats and soybeans and by the end of the day had both spaces emptied of grain. The next 2 days, we moved all the LTS foods to the granary, covered them with the 4x4 slabs and shoveled grain over the top. The oldest canned goods, ~500 jars, were in the basement on those shelves I built way back when.

The general rule is to use your canned produce within a year. Since we'd gone with doubled gardens, we were producing more than we could use. We checked the jars for bubbles and the lid to make sure it still held the vacuum, discarding any jars that didn't pass both tests. It wasn't many since we'd gone to the All American Pressure Canners. We hadn't even looked at the LTS foods since they weren't needed.

After considerable *debate* it was decided to just do our usual double garden, assuming we could plant. Tammy generally gave some of her friends in town canned vegetables from the garden provided they return the jar, the Tattler lid and ring.

There were still no crops in on Independence Day so this year was a bust. The granary was full and we could load up corn, oats and soybeans and have elevator mix the live-stock feed. We now had a second freezer, chest type, 25ft³. It was used but worked just fine. We took a beef and three hogs to the locker plant. The beef was cut as usual. The six hams, six picnics and six bellies were turned into brined smoked meat. The loins from the third hog were also prepared with the hams and we got another pile of sliced Canadian style bacon.

The back ribs from all three hogs were halved and packaged. The loins from one of the hogs were cut into pork chops and the loins from the second tied and cut into pork roasts. The tenderloins were made into breaded pork tenderloins again and the remainder of all three hogs went into sausage. We eat a simple breakfast, eggs, sausage or bacon, toast and beverage of choice. Some things were going on just like there'd never been a war. We got pullets without a problem. This time we got extra, we had plenty of freezer space.

It was 1816 all over again. The warmest it got was the low '60s and there simply wasn't enough light to grow either field crops or a garden. While still sheltered, we'd thawed roasts, dug carrots from the sandbox, added onions to the remaining potatoes and canned a simple beef stew. By then, we had little choice because potatoes only hold so long, even at 40°. We even canned a portion of the potatoes as plain 'boiled' potatoes to go with the meat we had on the hoof and in the freezers.

We did have a source of income; the locker plant was paying well above market for live animals to supply the grocery stores. While we couldn't feed the town with what excess we had, collectively the County farmers could. People apparently paid attention to the

locker plant noting comings and goings. We saw a lot more traffic on the gravel road that ran past our place. With everyone proficient with their firearms, we took to carrying handguns which would allow an opportunity to retrieve our long arms... in the event of trouble. I can't say I was surprised to see the Sheriff's SUV pull in.

"No crop this year I take it?"

"Ask anyone Sheriff. We have the water but lack the growing temperatures and sunlight. Had to sell the only extra feeder we had to the locker plant. We'll have hogs in a few more months, but I'm afraid that's about it."

"You still have those 500 quarts of garden produce you mentioned?"

"No sir. We ate some and sold some to acquaintances. I hope we have enough to get through for the next 15 months when we'll be harvesting... assuming anything grows. If you could get your hands on some hard wheat it could be ground in flour. Oats can be rolled or milled to make Scottish oatmeal."

"Mind if I take a look around?"

"As a matter of fact, I do. That's not to say I won't give you a guided tour. I don't believe I want to let you do a warrantless search. You want a mug of coffee to take with you on the tour?"

"You have coffee?"

"You don't?"

"That was one of the first things to sell out. Nobody I know of has coffee."

"I think we can maybe spare a can. Folgers ok?"

"Hell, I'd settle for a can of French Market."

"We only have that in the 1 pound cans. I was thinking about a 3 pound can of Folgers."

"The Folgers would be great."

"How about we grab the coffee and get the Folgers from the basement?"

"Heard you had Allied build a shelter."

"Yep, I'll include that on the tour. Tammy, would you run down to the basement and open the door to the shelter?"

"What for?"

“I’m giving Sheriff Lynch a tour to show him the limit of our supplies.”

“Sure. It will be about 2 minutes before the coffee to quits dripping.”

“Grab a can of Folgers while you’re down there if you would.”

She returned about the time the coffee quit dripping and I poured two mugs. She sat the can of Folgers on the kitchen counter. Considering all the extra shelving built for the LTS foods and the home canned produce, they looked positively bare due to hiding the LTS foods in the granary and the canned produce in haystack.

“That’s a lot of empty shelves.”

“I told you Sheriff. Seen enough?”

“Big haystack over yonder.”

“We have that hay to feed the cattle and a granary in what used to be the hay mow for the barn. Say, how did you make out at the elevator on North Main?”

“Pretty well actually. We’re planning on grinding the corn and soybeans for cornmeal and whatever we can make out of the soybeans. I have to see if we can get an oats roller somewhere.”

“Try Quaker Oats in Cedar Rapids. Carnation has that instant breakfast food slash instant milk factory in Waverly.”

“We’ll see what we can do.”

“You want to look at the grain in the barn?”

“No thanks, we don’t really need it. We have a bunch of people in town putting in small gardens using the seed we got from Janice Welton. Don’t know how that will work out.”

“You should get some root crops if nothing else.”

“Oh?”

“If you can get your hands on some potatoes that are sprouting, cut out the eyes with a little flesh and plant them. Make sure they get plenty of water since a large portion of the tuber is water.”

“You’re not planting this year?”

"I doubt it due to the lack of sunlight and the cool temperatures. I read a story a few years back concerning the weather and even though it got pretty cold down on Table Rock Lake in southwest Missouri, they were sure they'd get root crops. That's why I suggested potatoes. Most of the folks around here usually have meat, potatoes and a vegetable for their main meals. Plus regardless of how you process the oats, you'll have breakfast cereal."

"That doesn't seem right. We're all in this together. Be that as it may, how long do you think it will take the skies to clear enough for you to plant crops?"

"I figure the earliest we can plant is next year. Like I told you, it takes sunlight and warmth."

"Are you going to plant root crops?"

"I'd have to say maybe on that. If we do, it'll be spuds, onions, possibly parsnips or turnips and maybe beets. Have you heard from FEMA?"

"I can't even get in touch with the statehouse. I think I should warn you Bob, they're been some banditry around the County. With the phones out, it's been a real problem. We wouldn't know about a lot of it except for neighbors coming into town and reporting it."

"Finding bodies or hearing gun fire?"

"Some of both; are you prepared to deal with it?"

"To an extent, yes, yes we are. We have centerfire rifles, centerfire pistols and 12-gauge shotguns."

"Ammo?"

"More than adequate."

"The Sporting Goods store owner made a run to Geneseo, IL and brought back a load of M1As. On the way, he stopped by his distributor and picked up a load of Ruger 5.56s, Mossberg 12-gauges and Glock pistols. If you have the money, they might be a good investment."

"Got it covered Sheriff."

Weather Patterns – Chapter 7

“I hear you have M1As, Ruger 5.56s and Mossberg shotguns.”

“Yep, went to Illinois and stopped by my distributor on the way back. I only have limited choices; someone beat me to the distributor.”

“Ammo?”

“Not much. You didn’t shoot up all that stuff you bought from the east coast did you?”

“Okay, what do you have in shotgun shells?”

“Remington Law Enforcement reduced recoil slugs and 8-pellet 00 buck. Had a run on hunting shells.”

“Which ammo?”

“Two cases each of slugs, 00 and #4 buck. Gold Dot 230gr .45acp and 124gr +P 9mm if you have it.”

“One case of each on the pistol ammo, sorry.”

“Got 2 G-26s and a G-30SF?”

“Yep.”

“How much?”

“Call it \$3,600 cash.”

“Give me a minute to think.”

[Seller’s market: pistols \$1,500, shotgun shells $200 \times 4 = \$800$, pistol ammo $600 \times 2 = \$1,200$]

“Throw in 5 extra magazines for the pistols and you have a deal.”

“Dealers cost on the magazines.”

“Deal. One hundred, two hundred... thirty-seven hundred.”

“Everything is on that cart. Next?”

I later heard he’d sold out by 4pm. We spent the remainder of the day on the range getting Rob used to the M1A, G-21SF, G-30SF and 590A1, Susan used to the SR-556,

Glock G-19, G-26 and 590A1 and Tammy used the G-26. The weapons were close to being broken in and I was out of #2, #4 and #6 shot shells. We had 5,000 each rounds of 5.56 and 7.62 remaining. Maybe we could get it reloaded...

I must admit I was impressed with Rob. An M1A has a bit of a kick and the .45acp is a handful. Since the pistol was the short frame, his hand and it got along fine. He had a tiny bit of trouble dismantling it to clean it the first 2 times, but caught on.

Susan surprised me when she handled the Mossberg without much of a problem. She said she'd rather have the 870 and I traded her, picking up the Marine Corps bayonet in the process. When she complained, I gave both her and Rob the Ontario Marine Corps Fighting knives I'd picked up as an afterthought. Rob promptly offered to trade his 590A1 to his mother because he also like the Remington pump better than the Mossberg. The 590A1 had a heavier barrel and metal trigger guard, tang safety and ghost ring sights.

"Why did you go gun shopping and spend the day having us shooting?"

"Blame the Sheriff, if you must blame anyone. He mentioned that there were some bandits floating around hitting farms and shooting anyone present before they cleaned the place out. He mentioned that the owner of the Sporting Goods Store had been to Gene-seo, IL and hit his distributor on the way back. He suggested the weapons might be a good investment."

"Fat lot of good the weapons will do when we're sleeping. Oh no you don't, I know that look. Night guard shifts?"

"I'm afraid so. I was thinking that we might let Susan and Rob do the first and last shifts and you and I take the two middle shifts."

"What about school?"

"Has the school bus been by to pick up Susan and Rob?"

"Well... no."

"Do you expect the school bus anytime soon?"

"That doesn't mean I like the idea of children up at night guarding the farm."

"Susan is 17 and a grown woman. Rob is a big strapping hunk, just turned 15, from all the hard work he does helping me. Besides, I assumed we'd have everyone equipped with the handheld CBs and whoever was on watch could warn those sleeping."

"What about lighting Dad? They'd probably shoot out the yard light first thing."

"If they do, get on the radio first and get everyone roused. We have those 5 million candlepower portable spot/floods if push comes to shove. The range is over half a mile, 2,800 feet."

"We only have two, Dad."

"Run out and buy more Rob; they're only \$500 each, if you can find them."

"You paid \$500 for a flashlight!?!"

"No, I paid \$1,000 for two spot/flood lights with rechargeable batteries and a ½ mile range."

"Why?"

"Because I could see any point on our half section from the homestead. I had no particular reason beyond that. I do have spare bulbs and batteries, just in case."

"I guess that I just don't understand. You couldn't be satisfied with a .308 bolt action rifle and had to have a sidearm and backup. We have a bomb shelter with a protection factor of over 50 million. We have food to last for years and you're unwilling to share."

"Tammy, you, Susan and Rob are my responsibility. I have a duty to protect you from everyone but yourselves; and, maybe yourselves if circumstances dictate. If it was a cold hard world before, imagine what it's going to be like in the future. If the Global Thermonuclear War wasn't bad enough, the Chinese did that follow-up strike on geological targets. We didn't get a lot of ash, but we'll have to work it into the soil and allow it to break down. It'll be great in the long term, and a pain in the butt for the short term."

"You asked if the self-propelled had another season in it and I told you that and more. I'm not so sure that's the case now. If that ash gets into all of the working parts and bearing surfaces, we could be hard put to harvest a crop. And that's only going to happen when the air clears and the temperatures rise. I think we should have built a greenhouse."

"Why don't we?"

"Greenhouses are expensive."

"It would depend upon how we went about it, Bob. We could build a frame out of dimension lumber and seal it in heavy clear plastic. If we put in fluorescent fixtures with half warm and half cool white bulbs we could generate our own sunshine. Some of the gals in town who grow violets do that and it works just fine. It shouldn't cost nearly what you dropped on those guns and ammo."

"Rob, what do you think?"

“It’s a weird idea, but I’m game if everyone else is.”

“The frame will probably be the hard part. Tammy, equal in size to the original garden?”

“Assuming you can get the lumber, why not?”

We weren’t looking to build fancy, only functional. We used concrete blocks underneath the stud walls, filling them with concrete that would harden around the bolt extending down from the base plate. We used wall studs 24” on center. We also used 2x6s for the rafters because they were only supporting some plastic and a few light fixtures. It was beyond crude, but seemed to work fine. Tammy and Susan were very selective in what they chose to plant. And since field work was out of the question, all four of us worked on the greenhouse or taking care of the livestock.

It was well that we adopted a policy of going armed with a handgun and keeping our rifles within reach. Reach is defined as how far you can get using your handgun to get to your rifle. Rob and I carried our G-21SFs and G-30SFs. Tammy and Susan had their G-19s and G-26s. Typically, we drop the rifles off inside the entrance to the barn, greenhouse or wherever we were working. Generally Tammy and I further loaded ourselves down with the Mossberg shotguns, carrying 12 rounds each of #4, 00 and slugs. The shells were alternated slug, 00, #4 repeated for the 9 rounds in the shotgun. There were 9 slugs in the sling with 6 00 and 6 #4 in the sidesaddle. The buttstock sleeve held 3 #4 and 3 00.

“Dad, the Sheriff is here.”

I slung my rifle and picked up the shotgun. A push forward on the tang safety would put it into condition 0.

“Sheriff.”

“Homemade greenhouse?”

“We’re doing our best. The plastic captures what heat there is and we have cobbled together grow lights.”

“Have you seen any bandits?”

“Sure haven’t. Made the investment you suggested, however, for a few additional pieces. I’m not sure that Susan and Rob aren’t a shade faster and more accurate than Tammy and me.”

“Big rifle for a teenager.”

“Big teenager and his attitude is about as bad as mine. Of we four, Tammy is probably the most reluctant to bring arms to bear and she’s no slouch.”

“Greenhouse giving you good yields?”

“All things considered, I’m tempted to say yes. The truth of the matter is that that’s relative to the growing conditions. With the low level of sunlight, not much heat collects and we can’t run the small generator we have 24/7. Compared to a quote normal unquote year the yields are dismal.”

“How are the canned goods holding out?”

“We’re probably down to our last 2 dozen jars.”

As we’d used the canned goods, the jars were washed and placed back in the cases on the shelves. When we’d opened the hay pile and removed jars, every case removed was replaced by a case of empty jars. We’d limited ourselves to 4 mixed cases at a time and the shelves in the basement contained a lot of empty jars, one for one for the full jars previously displayed.

Something in the Sheriff’s manner gave me the impression that he had no intention of stopping at asking questions. My thumb slid the tang safety forward with an audible sound. He moved his hands back to gripping his belt at the front of his pants. He’d dropped the left and right and his service pistol was in a low slung holster. It was a Glock G-22 in .40 S&W, the 10mm short and weak.

“Well... good luck on the greenhouse. Save me a tomato if you would. I reckon I’d better continue my patrol.”

Although the 10mm, developed by Jeff Cooper et al., was selected by the Federal Bureau of Investigation for use in the field following the 1986 FBI Miami Shootout, their Firearms Training Unit “concluded that its recoil was excessive in terms of training for average agent/police officer competency of use and qualification”, and the pistols that chambered it were too large for some small-handed individuals. These issues led to the creation and eventual adoption of a shortened version of the 10mm that would evolve into what is today the .40 S&W. The 10mm never attained the mainstream success of its downgraded variant, the .40 Smith & Wesson, but there is still an enthusiastic group of supporters who often refer to the .40 S&W as the *.40 Short & Weak*.

They mentioned the Miami Shootout as a reason to upgrade their caliber. I ran across a full account of the Miami Shootout and the caliber of their guns wasn’t the problem. Those FBI agents did everything against the book and they’re lucky any survived. If they need more firepower, why not the .357 magnum? If you search Ruger and Smith & Wesson looking for .357 magnum pistols you’ll be disappointed. S&W has .357 Auto pistols... that’s the .357 SIG. Now, if you could get hooked up with coonaninc dot com you could buy a 1911 pattern .357 magnum pistol.

Specifications

Caliber	.357 Magnum
Barrel Length	5 inches
Construction	Stainless Steel
Magazine Capacity	7 rounds + 1
Weight	42.0 oz. empty .48 oz. loaded
Length	8.3 inches overall
Height	5.6 inches
Width	1.3 inches
Sights	Dovetail Front & Rear, Black, Fixed
Grips	Smooth Black Walnut

Features

- Linkless Barrel (aka Browning Hi-Power)
- Uses standard .357 Magnum ammunition
- Recoil operated
- Extended slide catch and thumb lock for one-handed operation

Included

- Custom Carry Case
- One Magazine
- Lock
- Owner's Manual

Options

- Sight Upgrades
- Additional Magazines

Accessories

- Grip options offered as accessories

** Specifications subject to change without notice*

*** Make sure you have identified an FFL to have your pistol shipped to. We must receive your Dealer's FFL before your firearm will ship.*

It might be easier to buy an IMI/Magnum Research/IWI Desert Eagle in .357 Magnum.

Mark I and VII

The Mark I, which is no longer produced, was offered with a steel, stainless steel or aluminum alloy frame and differs primarily in the size and shape of the safety levers and slide catch. The Mark VII includes an adjustable trigger (retrofittable to Mark I pistols). The Mark I and VII are both available in .357 Magnum and .44 Magnum; the Mark VII has also been chambered for .41 Magnum. The barrels had a $\frac{3}{8}$ " dovetail, to which an accessory mount could be attached. Later Mark VII models were offered in .50 Action Express with a $\frac{7}{8}$ " Weaver-pattern rail on the barrel; the .50 Mark VII would later become the Mark XIX platform. Barrel lengths were 6, 10 and 14 inches for .357 Magnum and .44 Magnum, but only 6 or 10 inches for .41 Magnum.

Mark XIX

The most recent model, the Mark XIX, is available in .357 Magnum, .44 Magnum, and .50 Action Express (or .50 AE). This model comes in a variety of different finishes, such as brushed chrome or titanium gold. Magnum Research offered this model in .440 Corbon caliber (discontinued), a .50 AE derived case. Mark XIX barrels are available in 6-inch and 10-inch lengths only. Both the .357 and .44 Magnum XIX version have exterior barrel fluting, whereas the .50 AE versions do not.

The DE44CA (Desert Eagle .44 Magnum California) is the only XIX that is approved for dealer sales to the public in the State of California: it differs from standard XIXs in that it has a firing-pin block incorporated in its design.

Current-model Mark XIX Desert Eagles now have a new-style Picatinny rail along the top of the barrel, as opposed to the dove-tail style rail on previous models. Magnum Research also now offers a proprietary muzzle brake for both the .50 AE and .44 Magnum versions to help reduce recoil.

Don't you just love being able to choose?

"What was that about Dad?"

"I'm not totally sure. He gave me the heebie-jeebies and I decided to remind him that I was faster on the draw than he was. There's just something about that man I don't like. I wouldn't trust him as far as I could throw that pile of hay."

"All at once or one bale at a time?"

“Let’s get finished in the barn so we can help in the greenhouse.”

You surely noticed that I didn’t get in Rob’s face the way I would have if Tammy had asked the same question. Tammy and I have been married over 20 years and I’ve listened to her asking those questions for the entire time. If Rob keeps it up, he’ll get the same response as his mother generated, “A little of that goes a long way.”

“How big of a liar did I make myself out to be with the Sheriff?”

“What did he want?”

“Probably food. I told him how poorly the greenhouse was doing due to the limited light and low heat.”

“It’s between 80 and 85° in there and we run the lights full time. We’re getting as much or more than we’d get from the regular garden.”

“What, you’re not going to tell me I should be ashamed of myself for lying to the Sheriff?”

“A little of him goes a long way.”

“And, you’re not going to remind me that I’m disinclined to share with townsfolk?”

“How many of them have you seen come out here and offer to help? Janice knows what we’re doing and I got some seed from her that I was short of. I’ll give her a share of what we produce but I’ll be damned if I’ll share with the whole town.”

Oh, someone was turning to a new leaf. That’s part of the reason I took the hard line in the beginning. Yes, we had a lot of food stored in the grain in the hay mow and yes, we had a good amount buried in the hay pile, BUT that food may have to last us for a very long while. We would eventually run short of coffee, in 2-3 years, and tea, in 5-6 years, and hot chocolate in ~ 2 years but that meant we had time to look for more.

Jericho from *A Survival Plan dot com* said one of his favorite stories was Jerry D Young’s *Scavenger*. It starred Jimmy Holden and Lucy MacAtee and they recovered abandoned manufactured goods for the farm they lived on and for themselves. Would you care to guess if Jerry drinks coffee? How about the flavor of tea he prefers (Earl Grey & sometimes Chamomile).

[The Earl Grey blend is named after the 2nd Earl Grey, British Prime Minister in the 1830s and author of the Reform Bill of 1832, who reputedly received a gift, probably a diplomatic perquisite, of tea flavored with bergamot oil. Bergamot orange (*Citrus bergamia*) is a small citrus tree which blossoms during the winter and is grown commercially in Italy. It is likely a hybrid of *Citrus limetta* and *Citrus aurantium*.

According to one legend, a grateful Chinese mandarin whose son was rescued from drowning by one of Lord Grey's men first presented the blend to the Earl in 1803. The tale appears to be apocryphal, as Lord Grey never set foot in China and the use of bergamot oil to scent tea was then unknown in China. However, this tale is subsequently told (and slightly corrected) as on the Twinings website, as "having been presented by an envoy on his return from China".

Jacksons of Piccadilly claim they originated Earl Grey's Tea, Lord Grey having given the recipe to Robert Jackson & Co. partner George Charlton in 1830. According to Jacksons, the original recipe has been in constant production and has never left their hands. Theirs has been based on China tea since the beginning.

According to the Grey family, the tea was specially blended by a Chinese mandarin for Lord Grey, to suit the water at Howick Hall, the family seat in Northumberland, using bergamot in particular to offset the preponderance of lime in the local water. Lady Grey used it to entertain in London as a political hostess, and it proved so popular that she was asked if it could be sold to others, which is how Twinings came to market it as a brand.

Chamomile is a common name for several daisy-like plants of the family Asteraceae, specifically *matricaria chamomilla*. These plants are best known for their ability to be made into an infusion which is commonly used to help with sleep and is often served with honey or lemon or both. Because chamomile can cause uterine contractions which can lead to miscarriage, the US National Institutes for Health says pregnant and nursing mothers should not consume chamomile. Chrysin, a flavonoid found in chamomile, has been shown to be anxiolytic in rodents.]

Weather Patterns – Chapter 8

It just occurred to me that you might have thought that I'd be talking all about the drought and nothing else. Life is like a box of chocolates... according Mama Gump. Not only was the world economy in the dump, the unexpected hot, dry weather was a worldwide phenomenon. Countries like the US, Europe and Russia, which typically had exports, had none from the 2012 and 2013 crops. When the weather turned with slightly cooler temperatures and more moisture, national needs were met but exports were lower than normal.

Nations go to war because:

- They have nowhere else to go for resolving differences or grievances.
- They want what some other nation has. Quite often it is tied to land, or a kind of wealth.
- Religion can also be the cause of wars. This is because neither side can agree on what is morally right or wrong; because of their religious readings, customs, beliefs and ways of life prohibit such behavior. After some time tension can build up and start a bloody and gruesome war.
- Superiority and Inferiority, has been the cause of wars. Some races believe they are superior to another race and then wars can start. Note that these wars don't often become major international conflicts.
- A long standing hatred between nations that has built up over a number of years.
- Rivalry between nations.
- The three major needs of humans is probably the main reason for nations to go to war. These needs are food, water and shelter. If a nation or group is deprived of these essentials they resort to war to try and attempt to fix the problem.

That pretty much summed up what triggered World War III. It would be debatable that they had nowhere else to go; however, the UN was almost totally ineffective. I doubt we'll have to worry about the UN getting involved now. With FEMA missing in action and the Sheriff unable to contact the statehouse it seemed reasonable to assume that we were pretty much on our own.

I mentioned *Scavenger* earlier because we would probably find ourselves doing a bit in the near and distant future to keep things going. The claim used to be made that the average farmer fed 100 people. That was old news and the number was probably closer to 200 or more. If we local farmers got together we could probably feed the town and supply quite a bit to the city. That was assuming all the local farmers survived and it was a rather large assumption.

After all, the Sheriff already stated that bandits, as he called them, had attacked farms and killed people. The logical conclusion I reached when he told me that was it would be risky approaching other farmers unless they knew you and recognized what you drove. It, no doubt, would be a serious error in judgment to egress your vehicle with a weapon in hand. On the other hand, how did you dare egress your vehicle without a weapon in hand? Similar to *Catch-22*.

There was only one catch and that was Catch-22, which specified that a concern for one's safety in the face of dangers that were real and immediate was the process of a rational mind. Orr was crazy and could be grounded. All he had to do was ask; and as soon as he did, he would no longer be crazy and would have to fly more missions. Orr would be crazy to fly more missions and sane if he didn't, but if he were sane he had to fly them. If he flew them he was crazy and didn't have to; but if he didn't want to he was sane and had to.

As TOM phrased it, *you have to be crazy to fly bombers and if you're crazy, you can't fly bombers.* Apparently Orr crashed his Mitchell B-25 bomber in Switzerland so he could be interred for the balance of the war, or something like that.

Although the amount of daylight versus nighttime varies by the season, it averages twelve hours of each. Twelve divided by four meant three hour shifts. Susan wanted the early shift and Rob agreed to take the early morning shift. Tammy and I could either each take a three hour shift or do six hour shifts every other day. We decided to do the every other day approach and switch to the three hour shift approach if the former didn't work out.

I suspected that as hard as we were working some days those six hour shifts would be hard to pull without falling asleep. On that basis alone, I almost insisted that we each take a three hour shift and she could choose first. Tammy was equally insistent that the every other day approach would work best so, I caved. I also set my alarm clock for the first night she pulled an 11pm to 5am shift. I slipped out of bed at 2am and slipped up on her as quietly as I could. She was sound asleep.

Rather than wake her, I stayed up and waited for Rob to relieve her at 5am. When he came out around 4:50am he saw me and I got up and motioned for him to wait.

"Your mom is asleep. I've been covering her watch since around 2. Wake her but don't frighten her in the process. I want to see how she handles herself when she realizes she fell asleep."

"You expected this?"

"Suspected; we worked hard yesterday."

"Mom; Mom, it's Rob."

"I must have fallen asleep."

"I guess so. You're relieved."

"Coffee?"

“When did you get up?”

“Some time earlier.”

“How much earlier?”

“Two am.”

“I fell asleep.”

“I know. I had your back. I suspected that as hard as everyone worked yesterday, it would be difficult for anyone to pull a six hour shift without falling asleep. I managed five hours so I was more rested than you. I really think we should switch to the three hours shifts. Since it’s my suggestion, it will be ladies choice, 11 to 2 or 2 to 5.”

“How about Susan taking 8 to 10, me taking 10 to 2, you taking 2 to 6 and Rob taking 6 to 8?”

“Like I it’s said Ladies choice. If anyone should be taking 4 hours shifts, it should be Susan and Rob or we should all do an equal share.”

“Okay, I’ll do 11 to 2 and you can do 2 to 5. I might as well have the coffee; I don’t think I’ll sleep for a while. What are we going to do when we start running out of supplies?”

“We should not wait until we run out. I’m of the opinion that we should start salvaging, scavenging or scrounging immediately.”

“I could live with salvaging and scavenging but scrounging is out. I do not like the connotations of scrounging.”

“Doesn’t seem to bother the Sheriff.”

“I am not the Sheriff. What do we need to look for first?”

“We’ll start with diesel fuel of any kind whether petroleum, biodiesel or blended. I suppose it would be a good idea to find an identical generator to the Quiet Diesel 12.5 and all the filters and spare parts we can find. We need to do like Jimmy Holden and Lucy MacAtee and locate warehouses where we can collect large amounts of things we need.”

“TOM or Jerry?”

“Jerry.”

“I swear that you live in a fantasy world at times.”

“Planning Pays Off.”

“I read that one. I like Jerry better than TOM. I think TOM must walk funny from having an M1A shoved up his butt.”

“Good rifle.”

“So is the SR-556 and a 12 gauge is a 12 gauge regardless of who made it. Those Glock G-19s and G-26s have smaller grips and are just right for Susan and me. Rob couldn’t hold the Glock G-21 if it weren’t a short frame.”

“His hands are almost as large as mine.”

“Do you think you could hold the standard Glock 21?”

“It would be a reach, I’ll have to admit.”

“When do you intend to begin scavenging?”

“The sooner the better. We should check the fuel distributors in the city first and get diesel, gasoline, kerosene and propane. The 3,000-gallon commercial propane tank is only about half full. We’re good on diesel for the moment, but short on gas. The farm tank is down to 200-gallons. Work up a food list when you have a chance, keeping in mind what we’d have difficult time replacing. Include non-food products we’ll need like pads or tampons for Susan and you, toilet paper and facial tissue.

“Rob and I will keep an eye open for generator filters, spare parts and that backup generator I mentioned. There no reason not to include trade goods in our searches should we run into likely items. I think we should concentrate more on staples than canned goods, but if we find canned goods that haven’t frozen and thawed, we can add those. I was thinking about going into the city and getting a Ryder box truck and enclosed trailer. I don’t see any sense in advertising what we’re doing.”

The city had one coin dealer and two pawn shops which could be sources of precious metals of which we had little. I knew for certain they had a liquor distributor and a number of regional warehouses in addition to the fuel and propane distributor. I didn’t frequent the three gun dealers there, getting our firearms from the gun store in town. One of the warehouses was a bonded warehouse which stored among other things cigarettes, another trade good.

With the garden doing well, Rob and I set out to search the city. We drove there in my pickup since Rob could drive it and it had a ball hitch with 3 sizes of balls. Our first stop was Ryder where we borrowed a 26’ box truck and two of their U Haul’s largest box trailers. My truck had wiring from the last time I’d rented a trailer and the electrical

hookup and hitch connection when quickly. The box truck was already wired and took very little longer.

Our next stop was a welding supply shop with oxygen-acetylene welding/cutting equipment. They also sold thermal lances which I was familiar with. My thought was to hit the pawn shops and coin dealer first before getting the generator supplies and spare generator.

We didn't make large scores of precious metals, getting more firearms than anything. There were assorted Main Battle Rifles and Assault Rifles and several boxes of magazines. We went ahead and broke into the gun dealers, excluding one, adding ammunition mostly. We did find a Super Match at the first dealer and a TAC-50A1R2 with Nightforce 12-42x56mm Mil Dot scope, McCann Night vision rail, illegal Elite Iron suppressor and 12 extra magazines for a total 14 at the second dealer. There was a single box of 25 25-round M1A magazines and a single box of 20 round M1A magazines. Apparently the guy sold a lot of surplus and we found several 500 round cases of M118LR and even more cases of M193 and M855A1 packed in ammo cans in crates. The cans held 420 rounds on stripper clips, with a stripper clip guide in each can, and the crates 2 ammo cans.

We confirmed the presence of empty tankers at the fuel distributor and delivery trucks at the propane distributor. Finally, we cornered the supply of filters for the QD 12.5. After returning home, everything was unloaded into the machine shed except for the gold, silver and ammo. The ammo went into the hay stack with the canned goods.

The Super Match had been customized by Springfield Armory or McMillan and the Douglas barrel and receiver were parkerized. We selected a Nightforce 8-32x56mm Mil Dot scope and A.R.M.S. mounts and throw lever rings.

"Lots of stuff."

"A little gold and silver, two rifles and ammo plus filters for the generator. We should do better tomorrow when we bring out the diesel tankers and if time permits a propane delivery truck. I believe we'll have the essentials located and transported within a week."

Over the summer neither the Sheriff nor any residents of the town came looking for work or handouts. That gave Rob and me time to haul 9 tanker loads of diesel fuel and a mixed tanker of $\frac{3}{4}$ gasoline and $\frac{1}{4}$ kerosene. The propane distributor had 4 delivery trucks which we filled and drove home. We refilled the propane tank and returned to the distributor to top off the delivery truck. We had to drive to the Capital to locate a replacement QD 12.5. We got that and all the filters they had, 2 engine rebuild packages and 2 generator heads. We also picked up some 750gr .50BMG Hornady A-MAX and hunting loads for the M1As.

The local National Guard Camp was abandoned so we added a pair of Hummers; one with a Ma Deuce and one with an Mk-19. We used one to tow the second. With that, we

were loaded for bear. We didn't find much Mk211MP, 20 cans. Finally, Rob stayed home and Tammy went with me to the city, shopping for clothing and whatever else she had on her list. Since the Hummers had pintle hitches, we pulled the *borrowed rental* trailer with my pickup. There were a few people out and about; way more than when Rob and I had been to the Capital. I think she took every box of pads she found. Next, she shopped for first aid items including some drugs locked up in 2 pharmacies.

One pharmacy had QuikClot ACS gauze pads, gauze and combat bandages. We had room and located a medical supply business in the Yellow Pages and collected 2 10-liter oxygen concentrators, a pair of AEDs, oxygen masks, nasal cannula, 2 sets of adjustable crutches, 2 adjustable canes, cases of IV sets and Ringers, D₅W, normal saline and D₅NS. Over the counter items included additional bandages, gauze pads, regular and stretch gauze, Non-adherent dressing dressings, Band-Aids, self-adhering wrap, laxatives, anti-diarrheal, vitamins, aspirin, Tylenol, Ace bandages, non-sterile exam gloves, vitamins, Benadryl, and a host of other first aid supplies. From these supplies we produced 4 comprehensive first aid kits for self-aid and buddy-aid. She didn't say where she found the practice arm.

Lactated Ringer's solution contains 28 mmol/L lactate, 4 mmol/L K⁺ and 1.5 mmol/L Ca²⁺. D₅W is 5% dextrose in water and D₅NS is 5% dextrose in normal saline. Normal saline is 9 grams of sodium chloride (NaCl) dissolved in water, to a total volume of 1 liter.

Rob and I wrapped up at the height of the harvesting/canning season. We didn't use tables in our greenhouse, electing instead incorporate organic fertilizer and rototilling it into the soil. Every part of a pig or cow was used excluding the oink and moo.

Speaking of cows, our excess milk in was converted into Colby, Monterey Jack and Mozzarella cheese. These three were relatively easy to produce. We added some hot peppers to one batch of Monterey Jack for Pepper Jack. We were running out of storage places and ended up moving the equipment out of the machine shed giving us space to store the results of our scavenging operations.

We had the tankers and propane delivery trucks lined up in a row clearly visible from the road. We'd finally located PRI-D and PRI-G down at the Capital and stabilized the fuel. We'd bent some #9 wire into a sort of spiral and inserted it into the tanks after adding the stabilizer and powered the homemade whisk with an electric drill. We stirred each tank compartment for a full day. We had no way of knowing if it worked or not. Rob suggested we'd have been better off if we'd built a real, oversized whisk. I was afraid we'd burn up the drill motor. Don't laugh, there are such things as powered whisks. One popular type is the electric milk frothier for coffee drinks. And we could have easily found a heavy duty ½" drill in the city.

I put Rob off suggesting that we'd look for a heavy duty drill motor the next time we made it into the city. I further suggested that he get that whisk built and remember that it had to fit through the tanker hatch and we'd need some way to brace the drill. Two or

three years back I'd seen a Milwaukee drill in the city that could take up to a 1¼" chuck. That particular drill was fitted with an optional ¾" chuck. As I thought about the density of diesel fuel and the 250 RPMs the variable speed drill maxed out at, I suggested that the whisk be built of ¼" rod rather than #9 wire.

Nine gauge wire is 0.1144" thick and two gauge wire is 0.2576" thick according to my wire gauge chart. Quarter-inch rod was only slightly smaller than #2 wire and should work well, if he could keep the whisk rods in place. I'd forgotten he'd learned to weld and braze in shop class. He had a short list of items to pick up in the city: heavy duty drill motor with ½" or larger chuck, 6' ½" rod, 18' 9' ¼" rod, and a smaller welder with rods.

I left him to his own devices and went over our food stores with Tammy and Susan. We were short on some. The items we were short on could come in very handy. Included was commercial jerky and gorp or the ingredients to mix gorp. The recipe I enjoyed best included peanuts, cashews, almonds, raisins and plain M&M candies. It went on our food shopping list with other comfort foods. We'd purchased freeze dried strawberries in #10 cans and they could be added to the gorp as well as banana slices.

The completed whisk was solid and no amount of stirring diesel fuel would cause it to fall apart. Rob earned the right to test out his new toy. When he complained that it wasn't fair, I told him, *be careful what you wish for, God has a sense of humor*. When he said he didn't get it, I explained that according to TOM, it was an old AA expression. By the time he finished there was no doubt the stabilizer was well blended in. Next time we'd add the stabilizer before the fuel.

I'd read about BOLs several times and concluded that a BOL was essentially a remote location like a hunting camp or a cabin in the woods. *At Home in the Woods* was written by Vena & Bradford Angier (1951). He wrote a string of books on surviving in the woods. I didn't know if he or Robert Heinlein was the first real Survivalist. If a person were lucky, he or she might find a copy of the book in a used book store. Amazon had a near new copy for ~\$530. Heinlein's document was on the web. It was titled `Heinlein,_Robert_A_-_How_To_Be_A_Survivor.txt`

Heinlein suggested dynamite in your arsenal. Have you tried to buy even a couple of sticks lately? First off, they don't really manufacture dynamite, *per se*. At least none of the majors have made it in years. DuPont developed Tovex, a water gel explosive.

Be that as it may, now what? We were done scavenging for the moment, our food harvest was in and we had enough grain and hay for 2 years tops. Rob suggested we dig some foxholes. The correct (modern) term is defensive fighting position and that would be a lot of work. We drove into town and checked the fire station since they hand out empty sand bags during the occasional springtime floods. They used to have a pallet load which we're now working hard to fill with the load of sand we picked up at the quarry.

Jerry had mentioned Go-Baggers in *Z-Factor* but we couldn't find any and did it the old fashioned way, with a shovel. The filled bags were tied off with twine and stacked in the pickup. When the pickup started to get down to the frame, we'd haul the bags to where we'd build a fighting position. We wouldn't build fighting positions based on the four of us but rather on the possible avenues of attack. Besides, we had the 2 Hummers with a Ma Deuce and an Mk-19. We'd probably need someone in an elevated location to spot for the gunners. Since the Hummers were Up Armored, the ladies got the vehicles and I took the elevated location. That left Rob to move between the fighting positions.

In turn, that created a new problem; how to get Rob between the positions without getting his butt shot off. When we had the sand bags filled and stacked where we planned to build the fighting positions, we returned to the city and borrowed a trencher, a genuine Ditch Witch. It was a RT115 Quad trencher with the H910 trencher attachment. It would dig a 24" wide trench up to 100" deep (8' 4").

We had options so we discussed them. The first option was digging a single 24" wide trench 100" deep from one side of the homestead to the other or entirely around the homestead if we had the time. That would put all of our heads below ground level and with 2 layers of sandbags one would be as safe as a baby in its mother arms. It also limited visibility and we didn't have enough sandbags. We could risk a trip to the city to get more, but should we?

We decided to dig the trench 60" deep (5') and to enlarge the areas where the fighting positions would be placed. Sandbags followed 2 layers high by 3 layers deep. We didn't get that large of load of sand so future sandbags would be dirt-bags. After a quick trip to the city to pick up more bags, I started cutting the trench. Rob and Susan filled the extra bags with dirt and placed bags on the front edge of the 24" trench.

"I wonder what happened to the Sheriff?"

"Maybe he tried to push his weight around and somebody shot him."

"You wish. I doubt we've seen the last of the Sheriff. He knows we're growing food in our makeshift greenhouses and will eventually show up to collect his *fair share*."

"How much is his *fair share* Dad?"

"Answer your own question Susan. How much time and energy did he expend in producing what we got?"

"None."

"So, his *fair share* would be..."

"None."

“And according to him, his *fair share* will probably be...”

“All the excess we can’t eat?”

“More like *all of it*, Susan.”

“That’s not fair!”

“What does fair have to do with it?”

“We’ll work harder on the dirt-bags.”

“Deputy Dawg had better plan on staying away from here, else he might end up full of holes. He leers.”

Weather Patterns – Chapter 9

Of course the ground began to freeze before we had the homestead encircled with the trench. Although slowed, I kept going until the trench was completed. Tammy had helped Rob and Susan by holding the bags open for them to add the dirt. We use a twine baler so twine wasn't a problem to close the bags. Most farm implement dealers carried twine, too.

“Are you ready to call it good and get some rest?”

“I feel fine.”

“You don't look fine. Sitting on that trencher dawn to dusk digging a trench. How long did it turn out to be?”

“A few feet short of ½ mile. I didn't measure it, I calculated it. An acre is 43,560ft². Ten acres are 435,600ft². The square root of 435,600 is 660ft. Since the homestead is basically square, each side is approximately 660ft long. How are the kids coming on bagging the fighting positions?”

“They're about two-thirds done. Lately they've just been taking the bags to the fighting positions and filling them there. The front of trench is complete, 2 layers high and 3 layers deep.”

“They using the clove hitch I taught them?”

“That's clever. Of course once it's tightened, you have to cut it off since it can't be easily untied.”

[Back before the military used cable ties (invented circa 1958), cables were laced using a flat waxed nylon lacing wrap. The preferred knot was the clove hitch. You started using the free lacing end by wrapping one loop around the cables followed by a second loop. When you brought the second loop around you used your finger to raise the first loop and pulled the end under the loop. Finally, you held the loose end you'd just pulled through and pulled on the lacing wrap roll to snug the knot. Because the lacing wrap was small and flat, the only way to remove the knot was to cut it.]

HOW TO BE A SURVIVOR by Robert A. Heinlein

The Art of Staying Alive in the Atomic Age

Thought about your life insurance lately?

Wait a minute—sit back down! We don't want to sell you any insurance.

Let's put it another way: How's your pioneer blood these days? Reflexes in fine shape? Muscle tone good? Or do you take a taxi to go six blocks?

How are you at catching rabbits? The old recipe goes, "First, catch the rabbit—" Suppose your supper depended on catching a rabbit? Then on building a fire without matches? Then on cooking it? What kind of shape will you be in after the corner delicatessen is atomized?

When a committee of Senators asked Dr. J. Robert Oppenheimer whether or not a single attack on the United States could kill forty million people, he testified, "I am afraid it is true."

This is not an article about making the atom bomb safe for democracy. This is an article about you—and how you can avoid being one of the forty million knocked off in the first attack in World War III. How, if worse comes to worst, you can live through the next war, survive the aftermath, and build a new life.

If you have been reading the newspapers you are aware that World War III, if it ever comes, is expected to start with an all-out surprise attack by long-distance atomic bombing on the cities of America. General Marshall's final report included this assumption, General Arnold has warned us against such an attack, General Spaatz has described it and told us that it is almost impossible to ward it off if it ever comes. Innumerable scientists, especially the boys who built the A-bomb, have warned us of it.

From the newspapers you may also have gathered that world affairs are not in the best of shape—the Balkans, India, Palestine, Iran, Argentina, Spain, China, The East Indies, etc., etc.—and the UNO does not seem as yet to have a stranglehold on all of the problems that could lead to another conflict.

Maybe so, maybe not—time will tell. Maybe we will form a real World State strong enough to control the atom bomb. If you are sure there will never be war again, don't let me waste your time. But if you think it possible that another Hitler or Tojo might get hold of the atomic bomb and want to try his luck, then bend an ear and we'll talk about how you and your kids can live through it. We'll start with the grisly assumption that the war will come fast and hard, when it comes, killing forty million or so at once, destroying the major cities, wrecking most of our industry and utterly disorganizing the rest. We will assume a complete breakdown of government and communication which will throw the survivors—that's you, chum!—on their own as completely as ever was Dan'l Boone.

No government—remember that. The United States will cease to be a fact except in the historical sense. You will be on your own, with no one to tell you what to do and no policeman on the corner to turn to for protection. And you will be surrounded with dangerous carnivores, worse than the grizzlies Daniel Boone tackled—the two-legged kind.

Perhaps we had better justify the assumption of complete breakdown in government. It might not happen, but, if the new Hitler has sense enough to write Mein Kampf, or even

to read it as a textbook, he will do his very best to destroy and demoralize us by destroying our government—and his best could be quite efficient. If he wants to achieve political breakdown in his victim, Washington, D.C., will be his prime target, the forty-eight state capitals his secondary targets, and communication centers such as Kansas City his tertiary targets. The results should be roughly comparable to the effect on a man's organization when his head is chopped off.

Therefore, in this bad dream we are having, let us assume no government, no orders from Washington, no fireside chats, no reassurances. You won't be able to write to your congressman, because he, poor devil, is marked for the kill. You can live through it, he can't. He will be radioactive dust. His profession is so hazardous that there is no need for him to study up on how to snare rabbits.

But you should—if you are smart, you can live through it.

Now as to methods—there is just one known way to avoid being killed by an atomic bomb. The formula is very simple:

Don't be there when it goes off!

Survival methods in the atomic age can be divided into two headings, strategical and tactical. The first or strategical aspect is entirely concerned with how not to be where the bomb is; the second, tactical part has to do with how to keep yourself and your family alive if you live through the destruction of the cities and the government.

Strategy first—the simplest way to insure long life for yourself and family is to move to Honduras or some other small and non-industrialized country, establish yourself there, and quit worrying. It is most unlikely that such places will be subjected to atomic bombardment; if war comes, they will move into the economic and political sphere of the winner, to be sure, but probably without bloodshed, since resistance would be so obviously futile.

However, you probably cannot afford, or feel that you can't afford, any move as drastic as that. (Whether or not you can in truth afford it is a moot point, to be settled by your own notion of the degree of danger. The pre-War refugees from Nazi Germany could not "afford" to flee, either, but events proved the wisdom of doing so. There is an old Chinese adage, "In the course of a long life a wise man will be prepared to abandon his baggage several times." It has never been more true than it is today.)

There are several moves open to you which are less drastic. If you live on a farm or in a small village, several miles—fifty is a good figure—from the nearest large city, rail junction, power dam, auto factory, or other likely military target, strategy largely takes care of itself. If you are blasted, it will probably be an accident, a rocket gone wild, or something equally unforeseeable. If you are not in such a location, you had better make some plans.

Just a moment—a gentleman in the back row has a question. A little louder please. He asks, “Isn’t it true that the government is planning to disperse the cities so we will be safe from atomic bombs?”

I don’t know—is it? The only figure I have heard mentioned so far is \$250,000,000,000. Quite aside from the question of whether or not large scale dispersion can be made effective, there is still the question as to whether or not Congress would appropriate a quarter of a trillion dollars in peacetime for any purpose. That is a political question, beyond the scope of this discussion. We are concerned here with how you, unassisted, with your two hands, your brain, and your ability to plan ahead, can keep yourself alive during and after any possible Next War.

If you have to live in a large city or other target area, your strategical planning has to be a good bit more detailed, alert, and shifty. You need an emergency home, perhaps an abandoned farm picked up cheaply or a cabin built on government land. What it is depends on the part of the country you live in and how much money you can put into it, but it should be chosen with view to the possibilities it offers of eating off the country—fish, game, garden plot—and it should be near enough for you to reach it on one tank of gasoline. If the tank in your car is too small, have a special one built, or keep enough cans of reserve permanently in the trunk of your car. Your car should also be equipped with a survival kit, but that comes under tactics.

Having selected and equipped your emergency base, you must then, if you are to live in a target area, keep your ear to the ground and your eyes open with respect to world affairs. There will be no time to get out after rockets are launched. You will have to out-guess events. This is a tricky assignment at best and is the principal reason why it is much better to live in the country in the first place, but you stand a fair chance of accomplishing it if you do not insist on being blindly optimistic and can overcome a natural reluctance to make a clean break with your past—business, home, clubs, friends, church—when it becomes evident that the storm clouds are gathering. Despite the tragic debacle at Pearl Harbor, quite a number of people, laymen among them, knew that a war with Japan was coming. If you think you can learn to spot the signs of trouble long enough in advance to jump, you may get away with living on the spot with the X mark.

Let us suppose that you were quick-witted, far sighted, and fast on your feet; you brought yourself and your family safely through the bombing and have them somewhere out in the country, away from the radioactive areas that were targets a short time before. The countryside is swarming with survivors from the edges of the bombed areas, survivors who are hungry, desperate, some of them armed, all of them free of the civilizing restrictions of organized living. Enemy troops, moving in to occupy, may already be present or may be dropping in from the skies any day.

How, on that day, will you feed and protect yourself and your family?

The tactical preparations for survival after the debacle fall mainly into three groups. First is the overhaul of your own bodily assets, which includes everything from joining the

YMCA, to get rid of that paunch and increase your wind and endurance, to such things as getting typhoid and cholera shots, having that appendix out, and keeping your teeth in the best shape possible. If you wear glasses, you will need several pairs against the day when there will be no opticians in practice. Second is the acquisition of various materials and tools which you will be unable to make or grow in a sudden, synthetic stone age—items such as a pickax or a burning glass, for example, will be worth considerably more than two college degrees or a diamond bracelet. Third is training in various fundamental pioneer skills, not only how to snare and cook rabbits, but such things as where and when to plant potatoes, how to tell edible fungi from deadly toadstools without trying them on Junior, and how to walk silently.

All these things are necessary, but more important, much more important, is the acquiring of a survival point of view, the spiritual orientation which will enable you to face hardship, danger, cold, and hunger without losing your zest and courage and sense of humor. If you think it is going to be too hard to be worthwhile, if you can't face the prospect of coming back to the ruins of your cabin, burned down by drunken looters, other than with the quiet determination to build another, then don't bother to start. Move to a target area and wait for the end. It does not take any special courage or skill to accept the death that moves like lightning. You won't even have the long walk the steers have to make to get from the stockyard pens to the slaughter-house.

But if your ancestors still move in your bones, you will know that it is worthwhile, just as they did. "The cowards never started and the weaklings died on the way." That was the spirit that crossed the plains, and such was the spirit of every emigrant who left Europe. There is good blood in your veins, compadre!

It is not possible to tell exactly what to do to prepare yourself best to survive, even if this were a book instead of a short article, for the details must depend on the nature of the countryside you must rely on, your opportunities for planning and preparing, the numbers, ages and sex of your dependents if any, your present skills, talents, and physical condition, and whether or not you are at present dispersed from target areas or must plan for such dispersal. But the principles under which you can make your plans and the easiest means by which to determine them can be indicated.

Start out by borrowing your son's copy of the Boy Scout Manual. It is a practical book of the sort of lore you will need. If you can't borrow it because he is not a member of the Scouts, send him down at once and make him join up. Then make him study. Get him busy on those merit badges—woodcraft, cooking, archery, carpentry. Somebody is going to have to make that fire without matches, if that rabbit is ever to be cooked and eaten. See to it that he learns how, from experts. Then make him teach you.

Can you fell a tree? Can you trim a stone? Do you know where to dig a cesspool? Where and how to dig a well? Can you pull a tooth? Can you shoot a rifle accurately and economically? Can you spot tularemia (we are back to that ubiquitous rabbit again!) in cleaning a rabbit? Do you know the rudiments of farming? Given simple tools, could

you build a log, or adobe, or rammed-earth, or native-stone cabin from materials at hand and have it be weather-tight, varmint-proof, and reasonably comfortable?

You can't learn all the basic manual trades in your spare time in a limited number of years but you can acquire a jackleg but adequate knowledge of the more important ones, in the time we have left.

But how much time have we?

All we can do is estimate. How long will it be before other nations have the atomic bomb? Nobody knows— one estimate from the men who made it was “two to five years.” Dr. Vannevar Bush spoke of “five to fifteen years” while another expert, equally distinguished, mentioned “five or ten years.” Major General Leslie Groves, the atom general, thinks it will be a long time.

Let us settle on five years as a reasonable minimum working time. Of course, even if another nation, unfriendly to us, solved the production problems of atomic weapons in that length of time, there still might not be a war for a number of years, nor would there necessarily ever be one. However, since we don't know what world conditions will be like in five years, let's play it safe; let's try to be ready for it by 1950.

Four or five years is none too long to turn a specialized, soft, city dweller into a generalized, hardened pioneer. However, it is likely that you will find that you are enjoying it. It will be an interesting business and there is a deep satisfaction in learning how to do things with your own hands.

First get that Scout Manual. Look over that list of merit badges. Try to figure out what skills you are likely to need, what ones you now have, and what ones you need to study up on. The Manual will lead you in time to other books. Ernest Thompson Seton's *Two Little Savages* is full of ideas and suggestions.

Presently you will find that there are handbooks of various trades you have not time to master; books which contain information you could look up in an emergency if you have had the forethought to buy the book and hide it away in your out-of-town base. There are books which show how to build fireplaces, giving the exact dimensions of reflector, throat, ledge, and flue. You may not remember such details; being able to look them up may save you from a winter in a smoke-filled cabin. If there is any greater domestic curse than a smoking fireplace, I can't recall it, unless it be the common cold.

There are little handbooks which show, in colored pictures, the edible mushrooms and their inedible cousins. It is possible to live quite well on practically nothing but fungi, with comparatively little work; they exist in such abundance and variety.

You will need a medical reference book, selected with the advice of a wise and imaginative medical man. Tell him why you want it. Besides that, the best first-aid and nursing instruction you can get will not be too much. Before you are through with this subject

you will find yourself selecting drugs, equipment, and supplies to be stored against the darkness, in your base as well as a lesser supply to go into the survival kit you keep in your automobile.

What goes into that survival kit, anyhow? You will have to decide; you won't take any present advice in any case. By the time you get to it you will think, quite correctly, that you are the best judge. But the contents of the survival kits supplied our aviators in this latest war will be very illuminating. The contents varied greatly, depending on climate and nature of mission—from pemmican to quinine, fish hooks to maps.

What to put in your cabin is still more difficult to state definitely. To start with, you might obtain a Sears-Roebuck or Montgomery-Ward catalog and go through it, item by item. Ask yourself "Do I have to have this?" then from the list that produces ask yourself "Could I make this item, or a substitute, in a pinch?"

If shoes wear out, it is possible to make moccasins—although shoes should be hoarded in preference to any other item of clothing. But you can't—unless you are Superman—make an ax. You will need an ax.

You will need certain drugs. Better be liberal here.

Salt is difficult to obtain, inland.

It is difficult to reject the idea of hoarding canned goods. A few hundred dollars' worth, carefully selected, could supplement the diet of your family to the point of luxury for several years. It might save you from starvation, or the cannibalism that shamed the Donner Party, during your first winter of the Dark Ages, and it could certainly alleviate some of the sugar hunger you are sure to feel under most primitive conditions. But it is a very great risk to have canned goods. If you have them, you will be one of the hated rich if anybody finds out about them. We are assuming that there will be no government to protect you. To have canned goods—and have it known by anyone outside your own household—is to invite assassination. If you do not believe that a man will commit murder for one can of tomatoes, then you have never been hungry.

If you have canned goods, open them when the windows are shuttered and bury the cans. Resist the temptation to advertise your wealth by using the empty tins as receptacles.

Don't forget a can opener—two can openers.

You will have a rifle, high-powered and with telescopic sights, but you won't use it much. Cartridges are nearly irreplaceable. A deer or a man should be about the limit of the list of your targets...a deer when you need meat; a man when hiding or running is not enough.

That brings us to another subject and the most interesting of all. We have not talked much about the enemy, have we? And yet he was there, from the start. It was his atom bombs which reduced you to living off the country and performing your own amputations and accouchements. If you have laid your plans carefully, you won't see much of him for quite a while; this is a very, very big country. Where you are hidden out there never were very many people—at any time; the chances of occupation forces combing all of the valleys, canyons, and hills of our back country in less than several years is negligible. It is entirely conceivable that an enemy could conquer or destroy our country, as a state, in twenty minutes, with atom bomb and rocket. Yet, when his occupation forces move in, they will be almost lost in this great continent. He may not find you for years.

There is your chance. It has been proved time and again, by the Fighting French, the recalcitrant Irish, the deathless Poles, yes and by our own Apache and Yaqui Indians, that you cannot conquer a free man; you can only kill him.

After the immediate problems of the belly, comes the Underground!

You'll need your rifle. You will need knives. You will need dynamite and fuses. You will need to know how to turn them into grenades. You must learn how to harry the enemy in the dark, how to turn his conquest into a mockery, too expensive to exploit. Oh, it can be done, it can be done! Once he occupies, his temporary advantage of the surprise attack with the atom bomb is over, for once his troops are scattered among you, he cannot use the atom bomb.

Then is your day. Then is the time for the neighborhood cell, the mountain hideout, the blow in the night. Yes, and then is the time for the martyr to freedom, the men and women who die painfully, with sealed lips.

Can we then win our freedom back? There is no way of telling. History has some strange quirks. It was a conflict between England and France that gave us our freedom in the first place. A quarrel in enemy high places, a young hopeful feeling his oats and anxious to displace the original dictator, might give us unexpected opportunity, opportunity we could exploit if we were ready.

There are ways to study for that day, too. There are books, many of them, which you may read to learn how other people have done it. One such book is Tom Wintringham's *New Ways of War*. It is almost a blueprint of what to do to make an invader wish he had stayed at home. It is available in a 25 cent Penguin Infantry Journal edition. You can study up and become quite deadly, even though 4-F, or fifty.

If you plan for it, you can survive. If you study and plan and are ready to organize when the time comes, you can hope not only to survive but to play a part in winning back lost freedoms. General George Washington once quoted Scripture to describe what we were fighting for then—a time when “everyone shall sit in safety under his own vine and fig tree, and none shall make him afraid!”

It is worth planning for.

“A person who won’t be blackmailed, can’t be blackmailed.”—Lazarus Long

The only thing Heinlein left out was "There ain't no such thing as a free lunch." The free-market economist Milton Friedman also popularized the phrase by using it as the title of a 1975 book, and it often appears in economics textbooks; Campbell McConnell writes that the idea is "at the core of economics". The "free lunch" referred to in the acronym relates back to the once-common tradition of saloons in the United States providing a "free" lunch to patrons who had purchased at least one drink. All the foods on offer were high in salt (e.g. ham, cheese and salted crackers) so those who ate them ended up buying a lot of beer. Rudyard Kipling, writing in 1891, noted how he came upon a bar room full of bad Salon pictures, in which men with hats on the backs of their heads were wolfing food from a counter.

"It was the institution of the 'free lunch' I had struck. You paid for a drink and got as much as you wanted to eat. For something less than a rupee a day a man can feed himself sumptuously in San Francisco, even though he be a bankrupt. Remember this if ever you are stranded in these parts."

TANSTAAFL, on the other hand, indicates an acknowledgment that in reality a person or a society cannot get "something for nothing". Even if something appears to be free, there is always a cost to the person or to society as a whole even though that cost may be hidden or distributed. For example, as Heinlein has one of his characters point out, a bar offering a free lunch will likely charge more for its drinks.

Jerry says, “Prepare for the worst and hope for the best and remember TANSTAAFL.” TOM doesn’t use a signature, that I know of, anymore.

You ask yourself, “How does that apply to this situation?”

Well... we have two things in abundance, food and ammunition. Those in town, say the Sheriff for example, know we’re trying to grow food in our cobbled together greenhouse. What the Sheriff can’t be certain of is how well we’re prepared to repel anyone attempting to take our food. He was about to find out and the newest additions to our arsenal would be pivotal.

“Dad, I have dust on the gravel road.”

“How far out?”

“A mile, give or take.”

“Get the Super Match with that M118LR we picked up. I reloaded the rifle’s magazines with the good stuff. Grab the TAC-50 for me and the bag of loaded magazines. Tammy, Susan, we have company. Lock and load.”

“Aren’t you going to wait to see who it is?”

“Rob, can you identify the vehicle?”

“It’s the Sheriff and he has a convoy of 5 vehicles following.”

“Rob, I got the TAC-50; you get the Super Match and get into the trench. Tammy, you and Susan get into the Hummers and load the ammo belts.”

“What are you going to do?”

“Get in the granary and try to pick them off.”

“You be careful.”

“I will. That applies to all of you too, be careful and don’t expose yourselves except to take a good accurate shot. Rob, after you fire a couple of rounds, move to a different fighting position.”

You think maybe we hadn’t planned on this and weren’t prepared? Think again, the firing ports I’d cut into the four sides of the granary were protected with 2” of road plate fabricated from 1” road plate that Rob had welded together and then cut firing slits about 10” high and 18” wide. We even split plumbing pipe insulation and wrapped the edges so the rifles wouldn’t be damaged. The convoy didn’t stop at our place.

It was late in the year and around the time we generally received the Orionid Meteor shower. With the absence of city and town lights we should get a good view. Susan said another Ham said the Orionids are one of two meteor showers associated with Halley’s Comet with the other occurring in May. The Leonids Meteor Shower is associated with the comet Tempel-Tuttle that occurs in the same fall timeframe. We agreed Tammy and I would wake the kids when the shower started so they could watch.

Let’s face it, recreational events were few and far between and consisted of the Northern Lights, Aurora Borealis, and the occasional Meteor Shower. The Aurora Australis is the Southern Lights. The meteor showers sometimes had as many as 60 meteors per hour. Tammy called on the business band when the shower started and the three of us geared up and joined her to enjoy the light show.

“Uh, are they supposed to be that big?”

“Wow! I think maybe that’s larger than usual.”

“If you think that was large check out that one.”

“I do believe that it’s going to hit the ground before it burns up.”

“And that one?”

“Damn. Maybe we should get in the shelter.”

“What good would the shelter do if a really big one hits us?”

“Nothing. If one does, we won’t even know it. Rob, give me a hand with the barn. Tammy, Susan and you know the drill; empty the refrigerator and wait for us in the shelter.”

We had known since the war and Yellowstone that generators alone wouldn’t supply the power we needed, long term. The south facing home roof and barn roof were covered with PV panels which fed 8 MS-PAE Series Inverter/Chargers and dual banks of 2.2vdc submarine batteries. We didn’t buy the stuff; we found it... in the Yellow Pages. The same store had 30kw wind turbines and towers so we took a pair.

After closing up the barn, Rob and I helped Susan and Tammy finishing emptying the refrigerator and pantry where we stored our daily use goods. We’d rotated this year’s canning to the haystack and the contents of the haystack to the basement. The LTS foods remained stored in the granary.

Susan quickly got her Kenwood TS-2000 and scanning receiver up. That Ham I’d mention earlier had *adjusted* her radios eliminated the channel blocking features. Not that it mattered; there was no Cell Phone service. He’d also supplied a scanning receiver for the trunked bands used by the Fire Department and Deputy Dawg (Sheriff Lynch). The Volunteer Fire Department hadn’t been called out much for the War and Yellowstone.

Weather Patterns – Chapter 10

The following morning we crawled out of the shelter to check things over. Everything was undamaged. There was a cloud of smoke rising from town so we loaded up and went to check it using 2 vehicles. Rob rode with Susan and Tammy rode with me. What's that expression? Oh yeah, well involved. We aren't discussing any particular building; we're discussing the entire town. The fire had nearly burned out by the time we arrived.

The town now kept its 240,000-gallon water tower filled with a large diesel engine driven pump. The town's water system was gravity powered. Our best guess was that the town had been hit by one or more meteorites which started fires which the small fire department couldn't cope with. Mutual aid agreements between fire departments and law enforcement agencies had vanished in the aftermath of the war and Yellowstone.

It sort of brought to mind TOM's friend Clarence who kept an eye peeled on the sky. We hurried home in case any refugees from the town showed up. We would be able to grow that truck farm Deputy Dawg had mentioned way back when. Meanwhile we could feed an additional 100 people if we had to.

The townsfolk slowly straggled in, one or two families or partial families at a time. It rapidly became apparent that people had fled rather than continue fighting a losing battle against the wind driven flames. Worse, they couldn't count and by the next morning we had about 250 people filling every nook and cranny on the homestead. And who should show up, but Deputy Dawg himself, Sheriff Lynch.

Author's Note:

42 USC § 1983 - Civil action for deprivation of rights

Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State or Territory or the District of Columbia, subjects, or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress, except that in any action brought against a judicial officer for an act or omission taken in such officer's judicial capacity, injunctive relief shall not be granted unless a declaratory decree was violated or declaratory relief was unavailable. For the purposes of this section, any Act of Congress applicable exclusively to the District of Columbia shall be considered to be a statute of the District of Columbia.

End Note

"The town burned down."

"We saw the smoke and checked it out. Now, about that sug..."

“I’m taking charge here Bob and I intend to use your farm to grow food for the townsfolk.”

“Say what? Just like that? You’re not even asking?”

“Just like that and you’ll do it and like it!”

It was hard to distinguish which of the four of us fired first, but Deputy Dawg was dead when he hit the ground.

“You can’t do that!”

“LIKE HELL, WE JUST DID IT! Don’t you mean we shouldn’t have done it?”

“Semantics.”

“No they weren’t, there were 2 rounds of 230gr .45acp Gold Dot and 2 rounds of 124gr 9mm +P Gold Dot. The Sheriff has been a frequent visitor and since the war has had designs on what we should grow on our farm. We’re one of the few farms in the area that can operate as long as we get sunshine and sufficient heat from the sun. Was anyone able to evacuate any possessions with them when they fled the fire?”

“I’m Jacob Brown, and I guess I can speak for the folks since I was on the Town Council. We’ve already taken a sort of inventory and we don’t have much. Most folks brought a few changes of clothes, pantry items and their firearms and ammunition. Can you help us or were you just using the circumstances to shoot the Sheriff?”

“Yes, we can help you and no, we didn’t shoot the Sheriff because of the circumstances. His attitude got him killed. I’m not sure where we can house everyone.”

“The County has those big tents stored at the Fairgrounds. There are several and one has folding tables and chairs. It’s the one they use as a cafeteria. It has grills, stoves, ovens and deep fat fryers along with a cafeteria style serving line. They might not be the final solution, but they’d be a start.”

“You have a strange way with words. The Sheriff got The Final Solution, if you remember your history. Will it be much trouble to get the equipment you mentioned?”

“No, the County bought several of those 40’ Conex’ to store the stuff. We have two sets of wheels and a crane to lift the Conex’. It would only take a few hours to haul the stuff out here if you’re agreeable with us staying.”

“Let’s me check with the boss.”

“You heard what he said Tammy, what do you think?”

“I think we should have stocked more wheat and bought a flour mill.”

“That’s a yes?”

“They’re going to have to supply their own propane. I’ve seen that kitchen he mentioned and the equipment needs propane fuel and more power than our little generator puts out.”

“The boss says yes. You’ll have to supply your own propane and electricity.”

“No problem. Got a vehicle we can use?”

“I’ll have Rob drive you in using my crew cab. The extra people, if any, can ride in the back.”

It only took them minutes to get a group of men organized to head to the Fairgrounds. Tammy had been making coffee most of the morning and emptying the pots into one or the other of 3 30-cup urns she’d picked up at garage sales or off clearance shelves. I wasn’t sure just how long our supply of Folgers would hold out.

They returned with the first 2 Conex’ and a mobile crane 90 minutes later. We discussed a likely spot to drop the boxes, the Conex’ were set on the ground and the semis and crane headed back to the Fairgrounds. It would prove to be the first of several trips. Everyone pitched in and assembled the cafeteria equipment after emptying the first Conex. The second contained the tent for the cafeteria and it was about half erected when they pulled in with the second pair. The third vehicle this time wasn’t a crane; it was a 3,000-gallon propane delivery truck.

There were so many men working to get everything set up we were tripping over each other. With 2 more Conex’ we had 3 tents in the process of being erected. Rob came back pulling a mobile diesel generator from only God knows where. He was followed by a 9,000-gallon tanker load of diesel fuel. The next delivery was the 2 Conex’ with the tables and chairs for the Cafeteria. One of the women had set up coffee in two of three ninety cup urns and fired up the first when the generator roared to life.

It was a sight to behold because the assortment of tradesmen included plumbers, electricians, a guy from the propane company, two grocers, three meat cutters from the locker plant and at least one of just about every trade. One of the later truckloads was Red Cross folding cots and blankets. Since it would take some time to put in a large enough septic system for that many people, up to over 300 now, a flatbed load of Porta Johns was brought in and set up.

“How are you fixed on grain and hay Bob?”

“Jacob the granary is nearly full. What we’re short on is livestock.”

“We’re working on that. I figure a market weight beef will last a group this size about 2-3 days. The locker plant building is concrete block with a steel roof so it survived the fire. I told them to get a second generator and tanker for the locker plant. One of the guys said he knew where he could get wheat and a flour mill but wasn’t sure about yeast or the other things it would take to bake bread.”

“Water, sugar, yeast, salt, vegetable oil and bread flour are the ingredients for a loaf of bread. Do you know what kind of wheat?”

“He said he could get hard white, soft white and durum. I figured on the hard white for bread, soft white to cakes and pastry and durum for pasta.”

“We have enough yeast to get you started but not an unlimited supply.”

“That’s all we need. If you have a starting supply we can grow our own using potato water.”

“Vegetable oil?”

“Our current biodiesel supplier uses canola oil to produce biodiesel. I won’t claim we have unlimited supplies of everything we need but we have 5 different grocery warehouses under constant surveillance. We can use water softener salt if push comes to shove.”

“I noticed that several of us shopped at the same gun store.”

“Do you mean the M1As, SR-556s, Glocks and Mossberg shotguns? I guess so; he sold out by 4pm. Several locals made substantial purchases of 5.56, 7.62, 9mm, .40 S&W, .45acp and 12 gauge when the mail order ammo ban was passed. What do you want to do with the Sheriff’s body?”

“Bury him face down with his head pointing west?”

“I’d think that one would do something like that to insult a Muslim. The Sheriff was a Lutheran.”

“Close enough. Be sure to strip the body, he carried a .40 soft and weak.”

The day turned out to be one of the longest working days in memory. Once the kitchen was operating, a group of women started baking bread and another group worked on several pots of chili (with beans).

About that... in our part of the country, chili contains beans. Many use kidney beans and others pinto beans. These pots of chili had a mixture of kidney and pinto beans, coarse ground beef, onions and chili powder. There was a choice between home baked bread

or corn bread. There was more to the kitchen setup than had been revealed initially. It included crockery and flatware plus a 3 tank rack type dishwashing machine that would also wash trays. There were strapped 24 oz. bread pans and a bread slicer. The large 36" triple deck gas ovens could be used to bake bread, pastry, cakes or pizza and the temperature range was listed was 300°-650° F.

More people drifted in over the next day or two, it was getting difficult to keep track. Moreover, the apparent acceptance of the Sheriff's fate was an unresolved issue. The young man Susan had been seeing from time to time was within the group as was the twin sister of the young woman, Lisa, Rob had dated occasionally... for school functions way back when.

Therein lay a level of trust that allowed the four of us some insight into the group's thinking. The folks in this area are far to the right as those things go, conservative to the core. That didn't translate into acceptance or approval of our eliminating the problem the Sheriff posed to us and the group. The early word was that the group was going to take a wait and see attitude.

Lena, the sister, claimed that those she'd overheard discussing the shooting leaned towards holding us accountable to the group for our action. Allen, Susan's friend, said it was different among the men because many of them held dealt with the Sheriff's high handed ways. He wasn't the embodiment of *To Protect and Serve*, rather more like *My Way or the Highway*.

My view was pragmatic; more men had guns than the women. Hence the men would be the defenders of the keep. (A keep, from the Middle English kype, is a type of fortified tower built within castles during the Middle Ages by European nobility. Scholars have debated the scope of the word keep, but usually consider it to refer to large towers in castles that were fortified residences, used as a refuge of last resort should the rest of the castle fall to an adversary.) Our keep consisted of these 320 acres.

I cursed myself for some of my earlier decisions when it came to choosing firearms. That Super Match I talked myself out of had a proven accurate range of 1,000 meters, depending on the rifleman. The TAC-50A1R2 had a proven accurate range of 2,310 to 2,430 meters in the hands of Canadian snipers in Afghanistan. That dealer in the city had a TAC-50A1R2 in stock, before the war. He was a major Springfield Armory dealer in the area and had at least one of each model of their rifles in stock, before the war. Not that I didn't have them now, of course, courtesy of the other two dealers.

The dealer had some kind of arrangement with Hornady in Grand Island and he never charged full retail for their ammo while others sometimes charged a premium. In addition to that, he carried 7.62x51mm Lake City ammo including M852, a 168gr BTHP Match cartridge and the M118LR, a 175-grain Match round using Sierra MatchKing Hollow Point Boat Tail projectiles. He also had Lake City M993 126.6gr AP.

“Allen, what do you have for weapons?”

“Mr. Benson, I have a standard model M1A, Mossberg 590 and a Glock 21SF. By the time I’d scraped together enough money, he’d sold out of the 590A1 SPXs and all but the standard model M1As.”

“We might be able to remedy that, if we get lucky.”

“How?”

“That dealer in the city carried a full inventory of Springfield Armory and McMillan rifles. You know that McMillan had a full line of those tactical rifles before the war. They came in .308 NATO, .300 Winchester Magnum, .338 Lapua, .416 Barrett and .50BMG. He also carried the Remington M-24 SWS in .308 NATO.”

“But you have a Super Match and a TAC-50A1R2.”

“TOM always claimed that there are some things you can never have too much of.”

“Tom who?”

“That author from California, Tired Old Man. He’d probably give his heart and soul for a Super Match like mine and the TAC-50A1R2 setup we have.”

“Surely, the things wouldn’t be there this long after the fact of the war, Yellowstone and the attack of the meteorites.”

“We did a lot of salvaging after the war. We even made it to the Capital to pick up a second QD 12.5 generator and spare parts. You saw those 2 Hummers didn’t you? They came from the National Guard Camp northwest of the Capital. What say Rob, you and I go shopping tomorrow?”

“In the city?”

“In the city. Where did you come up with the expression of *the attack of the meteorites*?”

“Oh, well, that. Some of the others were talking like it was intentional and not some bizarre natural phenomenon.”

“You have full bottles and all those thermal lances Rob?”

“Yes sir. I also brought 22 25-round magazines for my M1A, 7 magazines for my Glock, my shotgun and extra buckshot. Which Hummer are we taking?”

“The one with the Ma Deuce.”

"I'll load my stuff."

"Stuff all the ammo cans for the fifty you can squeeze in."

"Are you expecting trouble?"

"Nah, we shot the Sheriff."

"I know that one."

*I shot the sheriff
But I didn't shoot no deputy, oh no! Oh!
I shot the sheriff
But I didn't shoot no deputy, ooh, ooh, oo-oo.)
Yeah! All around in my home town,
They're tryin' to track me down;
They say they want to bring me in guilty
For the killing of a deputy,
For the life of a deputy.
But I say:*

*Oh, now, now. Oh!
(I shot the sheriff.) - the sheriff.
(But I swear it was in self-defense.)
Oh, no! (Ooh, ooh, oo-oh) Yeah!
I say: I shot the sheriff - Oh, Lord! -
(And they say it is a capital offence.)
Yeah! (Ooh, ooh, oo-oh) Yeah!*

*Sheriff John Brown always hated me,
For what, I don't know:
Every time I plant a seed,
He said kill it before it grow -
He said kill them before they grow.
Read it in the news:
(I shot the sheriff.) Oh, Lord!
(But I swear it was in self-defense.)
Where was the deputy? (Oo-oo-oh)
I say: I shot the sheriff,
But I swear it was in self-defense. (Oo-oh) Yeah!*

*Freedom came my way one day
And I started out of town, yeah!
All of a sudden I saw Sheriff John Brown
Aiming to shoot me down,
So I shot - I shot - I shot him down and I say:*

If I am guilty I will pay.

*(I shot the sheriff,
But I say (But I didn't shoot no deputy),
I didn't shoot no deputy (oh, no-oh), oh no!
(I shot the sheriff.) I did!
But I didn't shoot no deputy. Oh! (Oo-oo-oo)*

*Reflexes had got the better of me
And what is to be must be:
Every day the bucket a-go a well,
One day the bottom a-go drop out,
One day the bottom a-go drop out.
I say:*

*I - I - I - I shot the sheriff.
Lord, I didn't shot the deputy. Yeah!
I - I (shot the sheriff) -
But I didn't shoot no deputy, yeah! No, yeah!
©Bob Marley (or, Eric Clapton, if you prefer)*

A gun dealer may stock expensive military style weapons and have them on display during business hours, but you can bet your life on the fact that when his store is closed those expensive firearms are in a gun vault. I'd seen the door to his vault. It was 10-12" thick and must have weighed a few ton. He kept his expensive ammunition in a basement vault but I'd never seen it.

The owner was a millionaire and his inventory and the arms he sold reflected the tastes of this particular millionaire. The store had been broken into and whatever firearms, ammunition and accessories that had been on the shelves were long gone. The door to the vault was intact despite attempts to enter. A simple cutting torch would have taken weeks to cut through the steel. Someone had tried and given up.

We checked the basement before starting on the main vault and it was the lesser challenge so we opened it first. While Rob worked on cutting into the main vault, Allen and I moved ammunition to the Conex we brought along. It was like the time we'd stored the canned food in the haystack only worse, ammo is much heavier than quarts of green beans.

Rob was having his own problems opening the main vault, it was high grade steel. He followed the path of least resistance and finished the cut the guy with the torch started earlier. I don't know if he specifically slowed down to avoid loading ammo but we finished at nearly the same time.

Author's Note: In September 2010 the United States Army's Joint Munitions and Lethality Contracting Center awarded Remington a Firm Fixed Price Indefinite Deliv-

ery/Indefinite Quantity contract for the upgrade of up to 3,600 M24 Sniper Weapon Systems currently fielded to the Army pending type classification as the M24E1 Enhanced Sniper Rifle (ESR). Later the Enhanced Sniper Rifle was classified as the XM2010. The major configuration change for this system was the conversion from 7.62x51mm NATO to .300 Winchester Magnum ammunition exploiting the M24's magnum length bolt action to provide additional precision and range.

The M24E1/XM2010 was considered a "total conversion upgrade", by which the barrel, stock, magazines, muzzle brake, suppressor, and even the optics were changed. Besides the re-chambering and re-barreling with a 610 mm (24 in) long, 254 mm (1 in 10 inch) twist rate (5R) hammer-forged barrel the main reconfiguration changes compared to 7.62x51mm NATO chambered M24 rifles were:

- Fitting a new chassis (stock) assembly, which maximizes the amount of physical adjustments for the sniper to provide a better user customized fit. The chassis has a folding buttstock that shortens the system for easier transport and better concealment during movement and accommodates the mounting of accessories via removable Mil Std 1913 Picatinny Rails.
- Fitting a 5-round detachable box magazine.
- Fitting a quick-attachable/detachable Advanced Armament Corporation sound suppressor with muzzle brake.
- Fitting a Leupold Mark 4 6.5–20x50mm ER/T M5 Front Focal variable power telescopic sight featuring a 30 mm tube diameter, first focal plane Horus Vision H-37 grid system range estimation reticle and Bullet Drop Compensation.
- Applying advanced corrosion resistant coatings throughout the system.

End Note

There were a minimum of 2 of every model of Springfield Armory's M1A rifle and more of the standard and loaded models which only varied in price by ~\$150. The magazines were from CMI in 20 and 25-round capacities and from X-Products in 50-round capacities, non-skeletonized. There were several brands of the M-16/M4 clones, all with the short stroke gas piston, with multiple cases of 30 round magazines and 50-round drums, non-skeletonized.

"Hello, would you look at this."

"I've never seen anything that looked like that."

"I have, way back when, on Wiki. Boys, behold the Remington M2010 in .300 Winchester Magnum. This rifle has a conservative range of 1,200 meters as equipped. That optic in the case is an AN/PVS-29 clip on night sight and the suppressor is from Advanced Armaments. The riflescope is a Leupold Mk IV 6.5-20x50mm with a bunch of extra features. Make sure all of these high priced weapons are in hard cases. If they don't come with a hard case, I saw more in the basement. I wish we'd found more of the Mk211MP at that National Guard Camp."

“We found 20 cans!”

“Twenty cans are only 2,400 rounds Rob. We’re probably more likely to use the Mk-19 than the Mk211MP. I can’t believe he had 50 cases of the Hornady 750gr A-MAX sniper ammo.”

“How many rounds per case?”

“Two hundred times fifty equals ten thousand rounds so we’ll probably never run out.”

“What about the other calibers?”

“He had a minimum of 5,000 rounds per rifle and in some cases, more. I suspect he probably had a shipment or shipments on order because there are holes in some of the stacks.”

“Would you guys mind if we swung by a warehouse I know about?”

“What’s in it Allen?”

“Grocery store items including food, paper products and the other things you usually find in grocery stores. I’m running low on cigarettes.”

“I didn’t know you smoke.”

“I haven’t been smoking much lately trying to stretch out my last carton.”

“Would they have cigarettes in a grocery warehouse? I would think they’d be stored in a bonded warehouse.”

“They were originally, but the grocery warehouse has locked bonded storage to make it easy for them to distribute the smokes.”

Despite cleaning the gun store out, and I mean there were nothing but bare walls when we left, we had a lot of space in the Conex we could fill with lighter weight goods (than the ammo was). We backed up to a loading dock and broke into the warehouse, an insignificant task. All the merchandize was on pallets which turned out to be a problem. The ammunition covered the floor from front to back about one layer deep. I wasn’t comfortable with the idea of running a forklift or pallet jack over the ammo. That meant that one person moved the pallets and two people emptied the pallets into the truck, by hand.

I drove the forklift and let the younger legs move the goods by hand. They started at the front of the Conex and filled it to the roof, moving back as it filled. I kept a good mix of products and they put the heavier items lower and paper products higher. When we’d

finished filling the Conex, it looked like we'd need 2 or 3 more Conex' to empty the place.

When we arrived home in late afternoon, they used the crane to lift off the filled Conex and replace it with an empty Conex. Allen proceeded to tell them about our good luck finding the grocery warehouse. No mention was made of emptying the high dollar gun store. I appreciated that but wasn't certain how we'd get the guns and ammo out of the Conex without making explanations.

"Jacob, I feel I should tell you that the grocery warehouse wasn't our first stop. I knew of a gun store in the city and felt that it wasn't likely that looters had cleaned the place out."

"And you went there first and cleaned it out, right?"

"In a word, yes."

"Finder-keepers."

"How would that apply to the grocery warehouse?"

"Was that your idea or Allen's?"

"Allen's."

"Like I said... finders-keepers. We'll replace anything and everything we've used up of your provisions. But this group, which is up to about 325 at the moment, is going to need a lot of food and other goods. We were just making it in town, just. Everyone got a little bit out but no one got all of their things out. It was sort of like guns and ammo followed by clothes followed by all the food they could carry.

"That said we didn't lose all that much food because we didn't have all that much food to begin with. Most of the vehicles were running, thank God, and everyone filled their vehicle with all they could carry. I think the best description would be controlled panic, if there is such a thing."

"How goes the search for livestock?"

"Better than we expected. We've rounded up maybe 45 head including cows, feeders and 2 bulls. The hogs consist of roughly 40 sows, 3 boars and 250 feeder pigs. We can't begin to count the chickens which include broody hens and layers. We'll keep the twenty odd roosters separated for the moment. We can string a net across the river at the narrowest point to add fish to the diet. They have the locker plant up and running and the meat is hanging to get a little age. They'll butcher every other day and cut the meat on the day in between, once they have extra meat hanging.

“They decided to smoke everything they can, excluding some of the boneless chops. The wheat project produced several tons of each variety and a Meadows 12” stone burr mill with a 5 HP single phase motor rated to grind 110-150 pounds per hour. It will grind oily, wet and dry grains. They found a power sifter when they found the mill and will sift the flour.”

“I told the Sheriff where to find an oats roller; did you folks ever go to Waverly and Cedar Rapids?”

“The equipment in both places was too big for non-commercial use. We found a smaller grain roller elsewhere and don’t really need to dehydrate milk or convert it to instant.”

“I’ve come to understand that there are two schools of thought among the group concerning our shooting the Sheriff.”

“I know that song.”

“Spare me, I’ve heard it already. Bob Marley or Eric Clapton?”

“Eric Clapton. Marley died young, cancer I think.”

“I wasn’t a fan. So are you aware of the divided opinions within the group?”

“You mean half wanting to take you to task and the other half wanting to slap you on the back and say *Well Done*? I’ve heard them. What it boils down to is whether the person had any personal dealings with the Sheriff. Those that did want to slap you on the back and those that didn’t want to slap your face, or worse.”

“Since you’re the leader, I’d be interested what you think.”

“The Sheriff and I crossed swords more than once. You didn’t happen to pick up any hunting knives in the city did you? We have a dearth of hunting knives.”

“We didn’t actually look. There’s a knife shop in the mall. We can look when we go back for the groceries.”

“They carry Cold Steel brand?”

“Among others, yes.”

Weather Patterns – Chapter 11

“If you can, find me a full set of their Emperor series including a Katana, Wakazashi and an O Tanto.”

“No Bowie knife?”

“Not for me.”

“Just remember not to take a knife to a gun fight.”

“I’ve got a National Match M1A, Remington Police Model 11-97P with the ghost ring sights and magazine extension, and a Para P-14 with a Warthawg as backup. I was figuring on the presence of blades giving me just that edge I’d need to clear leather.”

“Are you planning on carrying your M1A in a scabbard on a horse?”

“If I ride, yes.”

“Don’t use more than a 10-round magazine. We have a few 5-round magazines for hunting if you want some.”

“What are you getting at Bob?”

“Do you have a scope on your National Match?”

“Of course.”

“Throw Lever rings?”

“Absolutely. Oh, I see your point. The scabbard is custom and will handle the rifle with the scope mounted and a 10-round magazine inserted. It will even be okay with the suppressor installed.”

“So you’re into suppressors?”

“Best flashhider ever invented.”

“It’s a shame you didn’t get a Super Match.”

“Why?”

“Faster rate of twist hence heavier bullets.”

“I’m not worried; I bought one of those too and had to get the stainless barrel finished to match the stock. Put a very good 8-32x56mm Nightforce Mil Dot scope on it with that

AN/PVS-27, a Harris bipod and a Surefire suppressor. Are you familiar with the MUNS?"

"Yes, we have some."

"You can buy an M-107 for what one of those costs."

"The M-107 Barrett?"

"Right."

"Well there's nothing wrong with a Barrett rifle, I just prefer the McMillan series."

"Is that what you picked up in the city? There's a high dollar dealer there, or was before the war."

"He's out of stock at the moment."

"So, you had thermal lances?"

"Yep."

"We didn't and gave up trying to cut into that vault."

"Thank you. Say, you said you'd butcher every other day. You also said the number of cattle you rounded up was about 45, in total. You'd need over 180 head to butcher beef every other day."

"Yes, we will; we're still looking. Can you grow enough grain and hay?"

"Hopefully, that's up to Mother Nature."

"She can be a real bitch at times."

"Tell me about it. We only got a crop in '12, '13 and '14 because of irrigation."

"You irrigate? But, nobody in this area irrigates. You used some of the money First Security approved for your home improvement project to drill wells?"

"How do you know about that?"

"I'm the one that insisted on that Swiss Blast door. So there's obviously more here than meets the eye."

"Then you know about the shelter?"

"I won't tell anyone, Bob. Because of your project I had a shelter installed for my family and a few good friends. I still owe on the loan while you paid yours off in near record time. We had to mortgage our house to pay for the shelter and supplies. It's larger than yours but not by much, 50'x50'."

"Twenty-five hundred square feet as opposed to twelve hundred ninety-six square feet. How many bedrooms?"

"Two bedrooms and two dorms with 2 ¾-baths and a storage room. I modified your plans to suit our needs. We'd been thinking along those lines for a while. It took you actually doing it to get us off the dime. I was able to cut a deal with Allied since building yours gave them some experience and insight into what it took. We used 2 of the Swiss blast doors and the AV-300 rather than the AV-150.

"Like you, we installed an outside generator room. That eliminated the problem with carbon monoxide and carbon dioxide. We actually put in a pair of Quiet Diesel 12.5 generators set up to allow the second to kick in if we needed the power. We were conservative with our power use and mostly ran a single generator. The other advantage of that system was that if the operating generator shut down for any reason, like low oil for example, the second took over and an alarm sounded."

"That must have set you back a chunk of change."

"It did, believe me. But I see you have a pair of the QD 12.5s too."

"We do, but we only brought one. The other was a salvaged spare. New, but salvage. We got it at the Capital."

"Is that where you got the Hummers?"

"Yes. There's that Camp northwest of the city and it was abandoned. We got 2 up-armored Hummers and two guns, the Ma Deuce and an Mk-19. We located a trailer and attached it to the Hummer we towed and filled it and all the spare space in both Hummers with cans of ammo."

"Do you have a lot of ammo?"

"That would depend upon your definition of *a lot*. We didn't buy it all cheap but it is stacked deep. The overall cost has been reduced by scavenging. We find ammo, we take it all. If we don't need it, someone else might and would be willing to trade for it. Cleaning out that dealer basement ammo vault really helped."

"He had a basement ammo vault?"

"You didn't know?"

“I’d never been in the place but one time. I took one look at what he had for sale and the prices and left.”

“Tammy once said, *Fair enough, looking doesn’t cost anything.*”

“Related to your shelter project?”

“In a way, I guess I’d have to say it was. I was headed to the bank to apply for the loan and suggested she look for food on the internet.”

“Do you miss it?”

“The internet? Yes and no. We lost the ability to look up some little fact easily. On the other hand we couldn’t do that before the personal computer came along and the internet developed as a result of there being a whole lot of available users. If I recall correctly, the initial movement to create the internet began in the 1960s. It was intended to be a high level communications system between computer networks. I learned that when I checked out Al Gore’s claim that HE invented the internet.

“Actually, the origins of the Internet reach back to research of the 1960s, commissioned by the United States government in collaboration with private commercial interests to build robust, fault-tolerant, and distributed computer networks. The funding of a new US backbone by the National Science Foundation in the 1980s, as well as private funding for other commercial backbones, led to worldwide participation in the development of new networking technologies, and the merger of many networks. The commercialization of what was by the 1990s an international network resulted in its popularization and incorporation into virtually every aspect of modern human life. As of 2011 more than 2.2 billion people – nearly a third of Earth’s Human population – used the services of the Internet.”

“Like that matters now. We’re going in with Allen tomorrow and empty the grocery warehouse. Do you want a piece of that?”

“No, go ahead. We’re going to the city too to pick up some trade goods. It’s a different warehouse I know about, bonded.”

“High value goods?”

“In a way... they’re subject to taxes and stored in bonded warehouses. There may be more bonded warehouses although it’s the only one I’m familiar with.”

Authors Note:

Effective July 1, 1994 liquor brokers were licensed by the state to distribute liquor to retail vendors.

End Note

I was unaware that there was a liquor broker located in the city. I was also unaware that the control of tobacco products had been transferred to the Alcohol Control Division (re-named from Commission).

We left in my quad cab pulling the *borrowed rental* trailer. When Rob and I went to the bonded warehouse, we got more than tobacco. We had over 300 cases of tobacco products... mostly cigarettes and all the cases of liquor we could fit in a 53' semi-trailer. We scrounged around until we found a semi that would start and then hunted up the trailer. The liquor was on pallets and we loaded the pallets with a forklift, two layers high.

Next, we loaded the full cases of cigarettes and cigars above the liquor. The pipe tobacco went into the *borrowed rental* trailer, pickup bed and back section of the quad cab. Now, if we could corner the market on feminine hygiene supplies and toilet paper, our future was assured.

"Where are we going to store this stuff?"

"I haven't the slightest idea. Do you have any suggestions?"

"That farm ½ mile down on the other side of the road has a large machine shed. And it's empty 'cause he went broke in the drought of '12."

"Good idea Rob. We'll stop there and drop the semi tractor-trailer rig and that *borrowed rental* trailer. Check my toolbox in the well house; there's a hasp and new lock in the second drawer down. Bring the portable drill and the index of drill bits and some of those short carriage bolts."

"Don't drink too much while I'm gone, Mom will have your head."

"You tell her we may be late because I wanted to this merchandise unloaded and behind a lock."

"What should I tell her when she asks what we found?"

"Trade goods. We'll have to take a bottle of each to sample and make sure it's still good."

"Dad, beer and some wines spoil in the bottle but not distilled spirits. That 30 year old scotch was aged for 30 years before bottling, not after bottling. Can I have a Hummer for a vehicle since Susan got a pickup?"

"Is that the price for your silence?"

“No, I just want a Hummer, uparmored if available.”

“You know they’re gas hogs?”

“There’s over a million gallons of diesel at Walcott and we have plenty of PRI-D. And, she got 4 radios.”

“We’ll go tomorrow. Which gun are you going to install?”

“I’d prefer a Ma Deuce in a CROWS (Common Remotely Operated Weapons System that supports the Mk-19, M-2, M-240B and M-249). I’ll settle for an M-240B if that’s all we can get.”

We unloaded the merchandize into the machine shed, installed the hasp and lock and headed home. We were very late and the meatloaf was in the refrigerator. We did notice a new package of sliced bread. Rob and I made sandwiches and had a beer to wash it down. Despite what Tammy may think, both of our children are adults based on what they do on a daily basis and the fast job of growing up forced on them by the events. I got up early and had bacon, scrambled eggs, coffee and toast ready to serve when they drifted in just after 6am.

“What kind of trade goods did you find?”

“Booze and tobacco products. They should be valuable once everyone has some money in their pockets.”

“Right. Where are you two off to today?”

“The Capital to get another Hummer and trailer.”

“We already have 2.”

“Rob wants a Hummer and considering what we gave Susan when she turned 16, I intend to get him what he wants.”

“But we don’t have a TS-2000 to install in his Hummer.”

“We’ll look for one.”

The Hummers were equipped with those frequency-hopping AN/VRC-90 SINCGARS. What we really need to do was find some AN/VRC-90 SINCGARS for the house and shelter. This was the Guard, not active duty Army and the Guard was always provided with the leftovers. The handheld SINCGARS came in 2 forms: The Spearhead radio and the SpearNet.

ITT Exelis SpearNet is a MANET radio, which maximizes net coverage at all times, especially in urban environments and conditions where normal one-hop/point-to-point radios are unable to maintain coherent network coverage. Being a low latency multi-hop radio means that the range is only required to the next Soldier. Having multiple active SpearNet radios creates a network and consequently the range is extended. The Soldier does not need to manually update the radio; it is self-healing and rapidly updates the network as connectivity changes. This is transparent to the individual Soldier who can concentrate on his primary task without the worry of a 'no-comms' scenario.

The ITT Exelis Spearhead VHF portable handheld tactical radio provides dismounted Soldiers secure, frequency hopping voice and packet data with integrated GPS in a small, lightweight package.

Supporting full interoperability with the Exelis SINCGARS RT-1702 communications system, the software-programmable advantage of Spearhead VHF allows rapid deployment to specific customers who require varying features with different functional and operational needs. Spearhead VHF employs proven Exelis transmission and encryption security. This provides any country the ability to enforce their own unique, secure communications.

We'd have to get a disc and cable to avoid the tedious process of hand encoding the radios.

After a bathroom break, we got in the quad cab pulling the *borrowed rental* trailer and headed out driving directly to the Camp. We eventually found an uparmored Hummer with an M-240B installed.

"That's good enough Dad. Let's find another trailer and the ammo and get our butts home."

There weren't very many bunkers to check out and Rob found a list which detailed the contents of each one. We loaded all the belted 7.62x51mm we could find. We had space left over and Rod opened another bunker.

"Let's load these."

"What do you have?"

"Grenades. There is fragmentation, concussion, thermate, incendiary plus smoke in the next bunker over."

"What, no rockets? Don't tell TOM."

We filled the pickup bed, back seat, the *borrowed rental* trailer, the back of the Hummer and 2 military trailers with pintle hitches towed one after the other. We took our time going home since the Interstates were getting rough in places. This haul, except for sever-

al ammo cans of belted 7.62x51mm NATO 4 to 1 mix of ball and tracers and a small selection of grenades, was also unloaded into that machine shed. This time we were home in time for supper, chili again.

Anyone can prepare for the PAW; the real secret is surviving during the PAW. You take Jacob, for example. They apparently thought about being prepared but needed a little push to start down the path. Since he was apparently on the Bank's Loan Committee, he may have had an easier time getting the loan. He didn't have as much at risk should he default on his loan, only his home and shelter. I assure you that there wasn't a single home in town that had a market value of \$1,760,000.

While Jacob hadn't mentioned recovering their protected assets (the contents of their shelter) the subject was surely on his mind. It was readily apparent that the townsfolk were ranging out in multiple directions scavenging and salvaging. They had a semi-trailer for hauling livestock and a portable loading ramp and Iowa isn't the smallest state in the Union nor does it have a small amount of livestock being raised for market or to produce milk.

It was apparent that we needed more permanent pasture. In fact we simply need pasture, period. Before we had the extra wells drilled, we always had some unused, fenced acreage to turn the livestock out into to graze or wallow as the case may be. During '14, we'd kept them in a dry lot since we didn't have a whole lot of hogs and cattle. That was changing rapidly and to make matters worse, we had a lot of circus tents taking up more space, further reducing the available crop land. Something had to change and change fast or we'd essentially be out of house and home, as the expression goes.

"Jacob, I need a word or two with you to discuss a problem that is rapidly becoming apparent."

"We're using too much space and need to move?"

"I realize that it's going to be a bit of trouble. We cultivated 310 acres and kept the small number of livestock we had in our dry lot. We're storing some things in the machine shed of the farm across the road. The things have some value and we added a hasp and padlock. It's a full section and the guy went bankrupt back in '12."

"I knew that, the bank foreclosed on the section and rented it out until the war. I guess that's the solution being the bank wasn't part of a banking group and burned down in the fire. The family that owned the corporation didn't make it, unfortunately."

"Or, fortunately depending on one's view. There's plenty of acreage to farm and grow livestock on. There's also plenty of land to establish housing on."

"Do you have any idea how much lumber it would take to construct housing for 125 to 150 families?"

“It would probably be more than we could locate. I had another idea. TOM seems to fancy intentional communities being created in the aftermath of a disaster.”

“Is this Tom someone I know?”

“That depends on whether you read Patriot or PAW fiction.”

“I’ve read some. Jerry and Grand and a couple of the women writers. Oh, you mean Tired Old Man? He just wrote about some adventures he and a couple of AA friends supposedly had.”

“Those were his early *Three Amigos* stories, but that’s the guy.”

“He’s out in California, right?”

“I don’t know where he is at the moment or if he’s even alive. But he’s from Iowa, originally. Check that, that’s not right either; he was born in California in 1943, moved to Iowa in 1946 and was raised in Charles City. Went into the Air Force after High School and came back to Iowa to attend college. Graduated from Wartburg and got an MBA from Drake. Worked for the state for about 20 years, the last ten of which he was based in California.”

“He worked for Iowa but was based in California?”

“He worked for the Department of Revenue.”

“Back when Bair was the Director?”

“I think so.”

“I seem to remember something about out-of-state offices. Where in California?”

“The Los Angeles area. Five years after they moved there, they bought a home in Palmdale.”

“Palmdale, huh? They built the Space Shuttles there.”

“That they did, along with the B-2 bombers. I learned shortly before the war that the secret *Aurora* project was a cover name for the early B-2 bomber project.”

Author’s Note:

The Advanced Technology Bomber (ATB) began in 1979. Full development of the black project followed, and was funded under the code name “Aurora”. After the evaluations of the companies’ proposals, the ATB competition was narrowed to the Northrop/Boeing

and Lockheed/Rockwell teams with each receiving a study contract for further work. Both teams used flying wing designs. Northrop had prior experience developing the YB-35 and YB-49 flying wing aircraft. The Northrop design was larger while the Lockheed design included a small tail.

The Northrop/Boeing team's ATB design was selected over the Lockheed/Rockwell design on 20 October 1981. The Northrop design received the designation B-2 and the name "Spirit". The bomber's design was changed in the mid-1980s when the mission profile was changed from high-altitude to low-altitude, terrain-following. The redesign delayed the B-2's first flight by two years and added about \$1 billion to the program's cost. An estimated \$23 billion was secretly spent for research and development on the B-2 by 1989. MIT scientists helped assess the mission effectiveness of the aircraft under a five-year classified contract during the 1980s.

The Aurora legend started in March 1990, when Aviation Week & Space Technology magazine broke the news that the term "Aurora" had been inadvertently included in the 1985 US budget, as an allocation of \$455 million for "black aircraft production" in FY 1987. According to Aviation Week, Project Aurora referred to a group of exotic aircraft, and not to one particular airframe. Funding of the project allegedly reached \$2.3 billion in fiscal 1987, according to a 1986 procurement document obtained by Aviation Week. In the 1994 book *Skunk Works*, Ben Rich, the former head of Lockheed's Skunk Works division, wrote that the Aurora was the budgetary code name for the stealth bomber fly-off that resulted in the B-2 Spirit.

End Note

Weather Patterns – Chapter 12

“You don’t say. I always wondered, but what with Area 51, a person never knows what the Air Force is up to. So, how does he build intentional communities?”

“He seems to favor mobile homes including singlewides, doublewides and triplewides in some cases.”

“That makes a little sense, if you knew where we could get between 125 and 150 mobile homes.”

“I think we could start in Davenport and work our way west on I-80. We could send a second group south on I-35 and let them work their way north. There are only nine large metropolitan areas. The advantage to singlewides is that there’s no assembly required beyond leveling and hookups. The disadvantage is that a singlewide isn’t suitable for a large family.”

“What would we do, get a grader and grade a flat field across the road?”

“There or closer to the homestead. I don’t know how good his well is. Water is a consideration as is septic.”

“We have a few of the guys who worked for Allied Construction in our group. Who did you get to drill your well?”

“Al Jenkins.”

“Bingo. He made it and his equipment wasn’t stored in town. That solves the water problem. What about power? You have solar panels and two wind turbines but that wouldn’t be enough for 150 families.”

“There were more at the Capital.”

“PV panels or wind turbines?”

“Both. If we ran the homes on an east-west line we would have a south facing roof on the larger homes and could mount the PV panels at an angle on the singlewides. You got an electrician in that group?”

“More than one; got plumbers too and a little bit of every trade.”

“We should probably limit our searches to the larger cities first. Have to be careful down at the Capital to avoid the hot spot on the south side. Someone didn’t do their homework, they hit Fort Des Moines.”

“That’s shut down isn’t it? All there was there is the Children’s Zoo and Fort Des Moines Park.”

“I won’t tell them if you don’t.”

“Tell who?”

“The Russians nuked the 50 state Capitals and Washington DC followed by the largest 100 or so cities in addition to the above. The Chinese, we’re guessing, evaluated the Russian hits and opted for geological targets. We think that’s why we had Yellowstone and the other volcanic ash from the Cascade Range. They hit the New Madrid Seismic Zone dead on but didn’t have much luck with the San Andreas.

“Susan heard later from a Ham in Lancaster, CA. That’s about 15 miles north of Palmdale and the guy said that Palmdale had been wiped out. The San Andreas Fault runs through the south side of Palmdale. It was overdue for *The Big One*.”

“So this TOM may not have made it?”

“Who knows? He could have been in Lake City, Arkansas visiting his youngest or in Mason City visiting his oldest. They could have been in Des Moines visiting his wife’s two sisters. If there’s a way he could have landed on his feet, I’d be willing to bet he did.”

“Why would he be in Arkansas?”

“His youngest was deployed to Afghanistan on 1Apr14 and was expected home before the end of the year. Probably to kick his son’s butt for scaring 10 years of life off him. His main goal in life is to outlive his father by at least one day.”

“How old is he?”

“If he’s alive, uh... about 73.”

Author’s Note:

I’m dead and this is being ghost written, LOL. My ghost writer likes to explain the background on some of the things in the story and does it with so called *Author’s Notes*.

End Note

“How old was his father when he died?”

“I think 78½.”

“What, they didn’t get along?”

“Like fire and ice!” (I am being nice.)

So, we set about the next project which would take a few months. Because we had grain or could get toasted grain from the elevator (concrete silos), we concentrated on... tah tah, building an intentional community. The first pass, every new home we could find was hooked up and hauled here. The guys from Allied graded the ground and then the plumbers came along and dug it up with the Ditch Witch for water, septic, electric and gas.

Not that we expected another war, but, only the septic was plastic (PVC) and everything else was in metal. The septic tank was a humongous concrete affair and the leech field took weeks to install. They didn't want it to run too deep or too shallow and it had to have enough downslope for the output from the tank to reach the full run. The solution they decided on was about 2 months' worth of trenches for leech lines, 48 in total. I didn't measure how long they were so I'll guess 150'-200' each. Every 2nd or 3rd leech line, they used a reducer to switch to a smaller diameter feed pipe.

Table of Required Septic Tank Size for Daily Water Usage Volume in Gallons	
Average Sewage Wastewater Flow - Gallons Per Day	Minimum Septic Tank Size in Gallons of Effective Capacity Needed
0-500	900
601-700	1200
801-900	1500
1001-1240	1900
2001-2500	3200
4501-5000	5800

Septic Tank in Gallons Size Based on Number of Bedrooms	
0-2 bedrooms	750 gal.
3 bedrooms	1000 gal.

4 bedrooms	1200 gal.
5-6 bedrooms	1500 gal.

So, 150 homes with an average of 3 bedrooms equals 450 bedrooms at 300 gallons per bedroom equals 135,000 gallon septic tank?

Calculating Septic Tank Capacity in Gallons	
Round Septic Tanks	$3.14 \times \text{radius squared} \times \text{depth (all in feet)} = \text{cubic capacity. Cubic capacity} \times 7.5 = \text{gallons capacity.}$
Rectangular Septic Tanks	$\text{Length} \times \text{Width} \times \text{Depth in feet} \times 7.5 = \text{gallons}$
Rectangular Septic Tanks (alternative method 1)	$\text{Length} \times \text{width in inches} / 231 = \text{gallons per inch of septic tank depth. Multiply this number by septic tank depth in inches to get gallons}$
Rectangular Septic Tanks (alternative method 2)	$\text{Length} \times \text{Width} \times \text{Depth in feet} / .1337 = \text{gallons}$

The volume is 135,000 divided by 7.5 equals 18,000ft³. The inside dimensions of the tank they built were 50'×50'×9'. Someone must have slipped a digit, that's 22,500ft³. It's also the inside dimensions of Jacob's shelter. I wonder how thick the floor, walls and roof were. Well, I was just asking.

The next question becomes, how does one protect a Trailer Park with a mix of singlewide, doublewide and triplewide homes from the Mutant Zombie Bikers? You could use the Ditch Witch to dig a trench around the *Park*, but that would interfere with leech field, somehow. If you can't go down the other choice is to go up. Allied had a contract before the war to erect more concrete elevators so they were long on Portland cement. They had several railcars of it on a siding, initially paying demurrage because they had nowhere to unload it. And, you say, *Planning Pays Off!*

But Allied Construction has all of those 2'×8' metal forms and you can space them as far apart as you have sand, gravel and Portland cement. Maybe a shallow ditch, call it a footing, about 3'-4' deep topped with an 8' high concrete wall. It has to be thick enough to be bulletproof against, say .50BMG rounds... like Mk211MP. Mk211MP aka MP NM140 will penetrate 11mm of RHA at 1,000 meters; so says Global Security.

And, the US Government says in MIL-DTL-12560J (MR) of 24Jul09 that Class 1 armor is wrought armor plate with an ordered thickness of 0.098 to 6.000 inches (2.5mm to

152.4mm) which is heat treated to develop maximum resistance to penetration and Class 2 armor is wrought armor plate with an ordered thickness of 0.098 to 2.000 inches (2.5mm to 50.8mm) which is heat treated to develop maximum resistance to shock.

But Mk211MP only penetrates 11mm of RHA, 0.4330696". And RHA had nothing to do with concrete. The decision was made by the group and their decision was to build a fort, using concrete in lieu of logs. So I asked them what kind of concrete and how thick they intended it to be. They were going to use Rapid strength concrete, explaining that this type of concrete was able to develop high resistance within few hours after being manufactured.

This feature had advantages such as removing the formwork early to move forward in the building process at record time, repair road surfaces that become fully operational in just a few hours. They explained that this would allow a continuous pour because they could remove the forms from the strengthened concrete and move them forward. The thickness of the wall was under consideration since, they explained, they were uncertain how much resistance they needed. Concrete is well known for its compressive strength while lacking tensile strength unless it is reinforced.

They would use wire (woven wire fencing) rather than rod to reinforce the concrete and the coarse aggregate would be the local limestone from the gravel pit and the fine aggregate would be washed sand from a different location in the same gravel pit. There was a shipment of reinforcing metal fibers for the elevator concrete and it would be blended in to add additional strength.

The Park would have four gates constructed from 6" pipe or larger, depending upon what they could find. The gates would only open outward and holes were to be left in the concrete to insert addition reinforcing pipes, if needed.

"Is that it? A concrete fort with four reinforced gates? How do you intend on getting additional food inside if someone lays siege to your fort? How about merlons and embrasure slits or crenels? I'm asking if you intend to offer direct resistance or sit on your butts and wait for *them* to go away."

"Now see here, you have no reason to complain, you'll be across the road on your farm."

"We have a 5' deep trench behind 2 layers of sand/dirt bags that is about ½ mile long with several firing positions. We have four people..."

"Five," Allen said.

"Six," Lena added defiantly.

“We have six people and 3 machine guns, the Mk-19, a Ma Deuce and an M-240B. That only leaves 3 people free to guard the perimeter. And the gunner can't move their vehicles while they're using the guns. Did you leave room in the Park for livestock? How many people do you have that have more than minimal experience on a farm?”

“Is there a purpose for your questions?”

“If you can't see it, probably not. We'll move the materials stored in that machine shed to our machine shed so you can use it to store your excess food and supplies.”

“Where did you get those batteries in those two battery banks?”

“From that solar and wind business in Des Moines. They're manufactured somewhere in Germany. We took all they had, 48. You can use 6 volt golf cart batteries wired in series to attain whatever voltage you require. That will probably call for another trip to the Capital, but you can count us out.”

“Why?” (Didn't anyone ever tell him to never ask why? There are as many answers as there are people.)

“Two reasons. One, we don't need anything from the Capital. Two, someone has to tend to the livestock and it's become a fulltime job.”

“We'll start keeping it on our farm.”

“Suits me. Feel free to take a major portion of the livestock you have here while you're at it and get your grain from the elevator in town. I know that didn't burn down because the 6 silos are concrete.”

Susan had indicated that the meteor strike on the town seemed to be a random event because all of her Ham contacts were still on the air. That concerned me because if the word got out about our town, the cockroaches would come out of the woodwork looking for whatever they could get.

Their idea of creating a fort just didn't sit well with Tammy or me; mainly, because we'd be on the outside looking in. They got caught up in what they were doing; a continuous pour of 1-1½ miles of 3' deep footing and 8'×18" wall, without merlons and crenels. We started moving their livestock to their farm; why should we care for it and feed it if they wanted to do things their way? It's still a free county, albeit moderately damaged.

Our fences were conventional for the area, woven wire on the bottom to keep the hogs in and 3 runs of barbed wire above that to keep the cattle in. One didn't simply fence the pasture, assuming one had one... all of the fields were fenced the same. If it was good enough for good ol' Dad, and grandpa, it was good enough for me. Post were 10' apart, with one in three being a cedar post and the middle posts T posts. At the end of the

fence line a double cedar post arrangement with a third cedar post horizontal made for a solid corner.

The corners ran perpendicular to each other, hence required 5 cedar posts with the actual corner post sometimes being a larger diameter and sometimes not. Grandpa had started off with oak railroad ties for the actual corner post and it became an old family tradition. You'll find a lot of things being done on a farm according to family tradition. That doesn't stop us from trying new things; once we're convinced they're the better choice. We'd used hybrid seed for years but I resisted going to those GM seeds that Monsanto wanted everyone to use.

We used Pioneer hybrids but not their GM seeds. Some years we'd contracted with one of the seed companies to produce their heirloom seed because it paid better. We had to be careful that those fields didn't cross pollinate, too. They didn't do much hand detasseling these days, everything was done mechanically. We weren't about to invest in the equipment that would only see occasional use and did it the hard way. But we never had that large of a field when we grew seed corn and could manage doing it the old fashioned way.

We did pick up that second tractor we always seemed to need. Found it abandoned and all it took was set of plugs, points, condenser and coil plus a liberal application of PRI-G to get it going. It was an old Ford NAA and probably older than me. It wasn't the most powerful tractor around but it had a PTO, 3 point hitch, the toolbar plus a few implements like the mounted mower and a blade. Plus the mower blade had those windrowing straps to reduce one round of raking.

It was an item from a time since past since modern windrowers or swathers are generally self-propelled and much more complicated and expensive. I could envision someone like *Tom DeMassey* that Jerry wrote about in his tale *An Old Man and His Tractor* using something like the sickle bar mower with built-in windrowing straps.

Author's Note:

Excerpt from Massey-Harris Farming (Part 3 of 3 Parts): The Clipper Combine Now, when he pulled the mower out into the yard, he stopped in the shade of the elm tree near the shop. He removed the grass board located at the end of the cutter bar of the mower. Then he attached the windrowing attachment to the back of the bar.

He had purchased this windrowing attachment from Sears, Roebuck and Company. The Sears catalogue had advertised this windrowing attachment in sizes available for all popular horse-drawn and tractor-powered mowers currently on the market. Weighing only 130 lbs., the 7-foot windrowing attachment, Wayne had purchased for his Model 25 mower had cost \$29.00 plus delivery charges from the factory in Oshkosh, Wisconsin to the local Sears store in Spring Valley, Minnesota located 12 miles northeast of the Wells farm.

My ghost writer included that bit about the windrowing attachment because there aren't many folks around that had ever seen the device. What, you were expecting a machine for only \$29 plus shipping? Even adjusted for inflation it had to be a simple attachment.

End Note

I know it's off the point, but farmers rarely retired simply due to age. Most often they retired only when they were forced to retire, usually due to medical issues. My father had his first heart attack at age 55 and as soon as he could, was right back at it. Seven years later he had his second and was forced to retire. They built a new home in town and sold me the farm for what it cost to build the new house. They're both long gone now. Thank God they didn't live to see our Second Missile Crisis.

I don't know if that's what they'll call it; they may call it World War Three. Was it the war to end all wars? If I recall correctly, that's what they called World War One. Don't quote me. The British first used tanks during WW I. I know it because I watched *Indiana Jones and the Last Crusade*. The tank in the movie was a replica British/American Mark VIII. The problem the British had that they didn't go all out improving their tank. Adolph did that, and if there is a lesson to be learned it's that, *Bigger doesn't mean Better*. The King Tiger really didn't work out; probably because they didn't have enough. While 1,347 Tiger Is were completed, only 492 Tiger IIs were completed. The Allies bombed the Henschel und Sohn factory. It is estimated that this caused the loss in production of some 657 Tiger IIs. They weighed more than an M1A2SEP.

But, we didn't have any Abrams tanks or even a Bradley Fighting vehicle. We had 3 Hummers equipped with an Mk-19, a Ma Deuce and an M240B. As soon as we had their livestock moved, we built a shelter in those 20 acres we'd used for alfalfa back in '12 and moved the cattle and hogs. We even slapped on a coat of paint to help the shelter blend in with its surroundings. You may recall that the ground sloped down from the well to the back fence line.

The shelter was next to the irrigation well so we put in two tanks, one high (cattle) and one low (hogs) with float switches to turn the pump on and off.

After that task was accomplished, we removed the cases of canned goods and moved them to the shelter followed by the LTS food stored in the granary. The stairwell to the basement was a problem because we hadn't hidden the Swiss blast door and the firearms, ammo and other things we'd acquired ended up being stored on the basement shelving.

The stairwell was against the end wall of the house with a landing at the top and a wrought iron and wooden rail to prevent anyone from falling down from the side. We made a quick trip to the city and picked up enough dimension lumber and drywall to enclose the staircase and convert the landing into a closet. When the latch was released, the left wall of the closet swung inward exposing the stairs.

While we were at it, we picked up a pair of queen size beds for the kids bedrooms on the assumption that sooner or later we'd need the services of the minister and the kids would need something larger than a twin bed. It crowded those two smaller bedrooms a bit, but that's life.

We beat Jacob and the townsfolk's construction project by two weeks. And, they were working 24/7 to get the wall completed and the gates installed. I was quite surprised when Jacob came by with the suggestion that they install a tunnel from within the Trailer Park to our place. Before I could raise an objection, he said that what they had in mind was constructing a tunnel from our generator room to the barn. Their tunnel would connect to that tunnel and it would allow them a safe exit if things went belly-up over there.

Hey, free is good so I gave him the go ahead. Depending upon circumstances, we could keep the livestock in the barn or in the chicken coop and that back 20. They had been very busy because not only did they create the Trailer Park and turn it into a fort, they'd managed to collect about 100 head of hogs and a total of 400 head of livestock. They must have been aware of our activities in the back 20 because they created a 160 acre permanent pasture to graze their cattle and let the hogs wallow.

If you've read *Unintended Consequences* by John Ross, you know that hogs will eat anything, including people, since they're omnivores. Cattle, on the other hand, contend themselves with trampling you to death. That livestock wouldn't do them a lot of good if the MZBs laid siege to the Park. I pointed that out to Jacob, still trying to get him to understand the futility of their plans.

His counter argument was that they'd erected a warehouse and stocked it with large chest freezers and all the food they'd been able to lay their hands on beginning when they collected the mobile homes. Their primary problem, according to him, was their inability to locate enough PV panels, batteries, inverter/charge controllers and wind turbines. They're solution to the problem had been to locate a huge Cummins diesel generator and several double wall fiberglass fuel tanks plus a 30,000-gallon commercial propane tank.

He went on to say that they had 120,000 gallons of diesel in the ground and several fuel tankers to refill the tanks. They also had a dozen propane delivery trucks with additional propane. I kept my mouth shut; the only way they were going to learn of the dangers pertaining to some of their choices was to experience them first hand. Have you ever seen a propane explosion on TV? A boiling liquid expanding vapor explosion (BLEVE) is an explosion caused by the rupture of a vessel containing a pressurized liquid above its boiling point. Like a propane tank, for example. At least the fuel tanks were at the back of the Trailer Park and somewhat protected with berms.

Weather Patterns – Chapter 13

The only real problem I had with his tunnel suggestion was where we could find a blast door for the barn and said as much.

“Don’t worry about that Bob, I’ll pull the double-leaf blast door from my basement wall and we’ll use it at the bottom of the ramp in your barn.”

“Do you have any idea how much that door must weigh?”

“Not a problem, our crane will lift it once we knock out the concrete holding it in place.”

“You realize you’re going to have to knock out a section of the barn wall.”

“Not at all, the bottom of the ramp will be outside the barn’s footprint.”

Jacob seemed have a ready reply to every issue I raised. And, to tell the truth, I was getting tired of arguing. First, it was Tammy raising holy hell over the matériel stored in the basement and now it was Jacob who wasn’t open to suggestions. I had other things to worry about like planting 290 acres in crops, the greenhouse and preparing the large garden spot. All the complaining would disappear the first time we needed to use the small arms.

This year we’d be planting the seed corn that we’d held back from Pioneer. It would produce a lower yield so we’d have to adjust the acreage slightly with a view to retaining seed for next year’s crop as well as mixing livestock feed. Those concrete elevators didn’t burn down, but the mixing building was a total loss. We would have to compensate by using the grain auger to add the various grains and mixing them with a grain shovel. The expression *close enough for government work* would probably be expressed many times as the grains were mixed.

On the upside, Allen and Lena would be helping us over the course of the summer. Lena, Susan and Tammy would do the main share of the garden work and canning and Allen, Rob and I would prepare the fields, plant the seed and cultivate once, in the beginning. I said low till, not no till. You have to give those emerging corn and bean plants a chance to get established and after your only job is to ensure they have sufficient water. We’d probably lend a hand to the ladies when the garden began overwhelming them, as usual.

We also had to make arrangements with the guys working at the locker plant so we could refill our freezers. This year I was thinking about butchering 4 hogs and have two of the loins converted into breaded pork ‘tenderloins’. Most cafes that make their own pork tenderloins use sliced loin rather than sliced tenderloin to keep their prices competitive. Once the meat is tenderized, floured, dipped in egg wash and bread crumbs or other breading material, you can’t really tell the difference. Unless, of course, you have the locker plant make your breaded pork tenderloins from pork tenderloins.

Eight pork tenderloins wouldn't be enough meat to have the sandwich often if there were six of us eating instead of four. That would give us 8 hams and 8 picnics plus 8 slabs of bacon and a whole lot of sausage. They'd also render the leaf lard for us using a wet process and adding BTH so we'd have enough for a full year or more. We had them do it in the past and they'd always done a good job.

"Mr. Benton, I'm curious about that granary of yours. Why do you have 2" thick steel plates erected in certain locations up there?"

"We gave some thought to being able to fire on any attackers from an elevated position. The barn loft is our highest location."

"I don't see the wisdom in that. While you maybe have height advantage, the barn is frame construction and wouldn't be that difficult to set on fire. Does your well have a high enough flow rate to permit you to fight a fire? I haven't noticed any hoses or a portable pump."

"I hope not; we don't have either hoses or a high capacity pump. We gave a total of 5 wells including one for the homestead and 4 for irrigation. All five are 4" wells."

"Al Jenkins still has his well drilling rig across the road. He's finished drilling their wells and might be persuaded to drill a larger well over here. Al is really short on preps and his armory consists of an old single shot 12 gauge shotgun and a bolt action Remington .22 rifle. You have those extra firearms we got from that fancy dealer. If we could locate the materials, I'm sure Al would drill a well for an armory and ammo."

"Plain firearms or fancy?"

"He'd probably accept a standard model M1A with a dozen or so 20 round magazines, an 870P or 590A1 with or without the bayonet and something in .45acp, maybe M1911A1 with 4-6 spare magazines. You could start him with some military surplus 147gr FMJ .308 NATO, an assortment of reduced recoil 12 gauge slugs and buckshot and maybe a thousand of .45acp 230gr FMJ military surplus."

"You know him better than I do, make the offer Allen and if he says yes, give him the weapons and ammo. He can help us find the well casing and pump. Tell him the bigger the better because it's going to be the source of our water to fight any fires that break out."

"He's going to tell you that you need a water tower to fight fires."

"The town had a quarter million gallon water tower and a fat lot of good it did them. How long do you think it would take to put out a fire?"

"I don't know maybe an hour. You know that the fire truck didn't get burned up in the fire. It's not that fancy like a La France or anything but it can pump 1,000gpm. So you'd need 60,000 gallons stored less whatever the pump could replace in that hour."

"So we could have a pump with the hose and everything?"

"I was still sitting there out of diesel last I looked."

"Go talk to Al Jenkins. I'll get Rob and we'll go shopping. Did the fire station burn down?"

"No, it's concrete block and had a metal roof. Why?"

"Wouldn't hurt to check it out looking for extra hose and equipment. They must have a compressor to refill their Scott Air Paks."

I'll have to give the fire Department credit; they had Scott Air Paks with the AV-3000 face piece and 4500psi 60' cylinders. They had as much, if not more, hose at the station than they carried on the pumper. They had 1½", 2½" and 5" hose. The first two were for attack and the latter to feed water from hydrants to the pumper. They had purchased the pumper used back 2012. They needed a La France that pumped 4,000gpm and they had a GMC that pumped 1,000gpm. They were lucky to have that, according to Jacob who came over and inspected the truck when we got back.

"Everything work?"

"Haven't checked it out yet. First we have to figure out how it works."

"There are some of the volunteer firemen in our group plus one full time fireman that was the Engineer on that pumper. I'll send them over to show you the ropes."

"Thank you."

"I'll call if we have a fire."

"You got our phone number?"

"I'll call on channel 9 on the CB."

"Right."

"You need a water tower."

"Allen said you'd say that. Can you come up with a pump to fill a water tower? How big of a well are you going to drill?"

“The pump, probably; it depends on the well.”

“How big of a well can you drill?”

“Six inches. That’s good because I know where to get 6” well casing and a Sta-Rite L6TS300-600 pump. It will pump water from almost 400’ deep and you don’t have to worry about that since the wells here run around 300’. That pump is 60hp and will pump over 300gpm. Let me translate that, 18,000gph. I recommend a 40,000 water tank.”

“Why?”

“Because I know where there is a 40,000 gallon double wall fiberglass tank.”

“Where is it?”

“At my shop. I found it at Walcott while we were out searching for mobile homes and brought it home. I have 360’ of leftover 6” casing in stock from a previous job. And, we can rig that fuel tank with a 5” fitting to connect to the Pumper. Any other questions?”

“Did you already get settled up on firearms?”

“Bob, Al wouldn’t agree to anything until he talked to you.”

“What do you want?”

“An M-21 with a Leupold Mark 4 ER/T 6.5-20x50mm (30mm) M5 Front Focal riflescope on a Sadlak mount with an improved flashhider and 20 25-round magazines. The shotgun will be a Mossberg 590A1 SPX. The pistols will be Glock, a G-21SF and a G-30SF with extra G-21 magazines. For ammo, I’ll take 6 500-round cases of M118LR, 2 cases of Brenneke Black Magic slugs and 2 cases of 3” 15-pellet Remington 00 buckshot and 1,000 rounds of 180gr, 200gr or 230gr Gold Dot.”

“You sure you don’t want me to throw in my daughter and a pound of flesh?”

“Huh? That stuff I just listed for you will get you the well, well pump, casing, the 40,000-gallon tank and my labor. Let me amend the list, how about a HK-416 with 20 magazines and 5 cases of M855A1?”

“Instead of?”

“In addition to.”

“Can’t do it. The best we can do is a Ruger SR-556 with 20 magazines and the 5 cases of M855. That’s in addition.”

“Deal. I’ll get my rods and start dowsing.”

I let him dowse, it was harmless. Strangely, the new well would be in line with two of the existing wells. I think he subconsciously influenced his coat hangers. The well came in with a good output at 290’. That was well within the head capacity of the pump he selected which could handle a head of nearly 1,000’ with low volume and 350’ at 400gpm. He had this chart with the data about the pump... After the tank was installed, it took 101 minutes to fill it. We retrieved all the suction hose the fire department had, 8 additional 10’-sections or 100’ total. We might need it if the Trailer Park caught on fire.

If we had to use the pumper, it would empty the tank in 40 minutes... but the tank would still have 12,000 gallons to extend the firefight to 52 minutes. During those 12 minutes, the pump would add another 3,600 gallons extending the fight to 55.6 minutes and during those 3.6 minutes, the pump would add 1,080 gallons extending the fight 1 minute more, a total of ~57 minutes.

Did we have enough military matériel to withstand an attack by the MZBs? That remains to be seen. It could depend upon how many National Guard Camps they cleared out and how many settlements they’d already overrun. About the only active duty Marines in Iowa are recruiters, assuming they’re still here. Our farm is west of Iowa City, near Williamsburg. We weren’t on I-80 but it wasn’t that far away. It was the entrance to The Amana Colonies. We assumed the pickings would be too good in the city (Iowa City) for them to bother with us.

The problem with assume is it makes an ass out of u and me. Would the bad guy hit us because we appeared to be a target of opportunity as compared to the fortified trailer park? Time would tell.

Allen and Susan announced that he had proposed and she had accepted. They’d already located a 3 bedroom singlewide trailer with furnishings and wanted a plot to set it on the homestead. The homestead was running out room; between the ‘water tower’, the defensive ditch, fighting positions and the line of diesel and other fuel tankers and or delivery trucks.

Since we’d realized early on how impractical it was for Allen and Lena to move back and forth between the Fort and the Farm, we put them up in 2 spare bedrooms. I guess one thing led to another. How much longer would it be before Rob came to me to discuss proposing to Lena? What could I say, *but you’re only 17*.

I didn’t ask if they were expecting because we’d raised her right. And if they were it couldn’t be undone. Allen selected Rob as Best Man and Susan selected Lena as Maid of Honor. Basically it would cost us \$50 for the preacher and a bunch of food for the reception. The idea of a Luau struck my fancy since we weren’t short on hogs and we could either come up with the side dishes or some of Tammy’s friends in the Trailer Park could contribute.

The main side dish was potato salad. It just takes potatoes, onions, eggs, celery (celery seed substituted) and homemade mayonnaise (egg yolk, canola, vinegar with mustard being optional).

If you've seen one wedding, you've seen 'em all as far as that part goes. They managed to come up with a wedding dress for Susan and a suit that fit Allen. Someone had a CD that contained the Wedding March. Of course, the math of the situation was simple, $1+1=3$.

I decided that I'd better start looking for another singlewide now rather than waiting until the need arose. I got Rob to help me so I could solicit his opinion if we did happen to find another home. We were a long way from home, Council Bluffs, when we found a dealer with three singlewides on his lot. One was 2 bedroom and the other two were 3 bedroom. Rob particularly liked one of the 3 bedroom homes. The only thing I can say about that is that he must have *High Hopes*. We located the skirting and leveling stands and packed them inside the trailer. We even found a spool of the auto regulating heat tape and added that.

We had to work at getting the tow vehicle running but PRI-D saved our bacon. I was relatively certain that since both Lincoln and Omaha had taken nukes the semi wouldn't start. Rob pointed out that *it was older than dirt* and *didn't have a computer*. It had just been sitting for a long time and patience was called for. While he worked on the engine and fuel, I found a liquor store and refilled some stocks that had been used up. I took a bunch of soda pop too; it doesn't go bad unless it's diet, right?

"You driving?"

"It's got an automatic transmission, I can handle it."

"Ok. Just remember it won't stop on a dime pulling that load. Are the tanks full?"

"Yep."

"Ok, it'll be non-stop from here to there. I figure about 6 hours, give or take."

"I was thinking between 4½ and 5."

"How so?"

"It was about 225 miles to here from home. At 55mph, that's four hours. I added in one stop at a rest area. There were some cars on the road and that will slow us anywhere from 15 minutes to 45 minutes. Therefore, 4½ to 5 hours."

"Did you move your firearms?"

"Yeah, did you get more booze?"

“Yeah, even got some soft drinks as mixers.”

“Are they still good?”

“They aren’t diet.”

“Any Coke? I’d kill for a Coke Classic.”

“A few cases. Got Coke, Seven-up, A & W Root Beer and Schweppes brand Ginger Ale, Tonic, Club Soda and some off brand Collins mix. “

The ladies preferred mixed drinks when we kicked back and relaxed. The only beer available was some homebrew one of the guys in the Trailer Park made and he needed to work on his recipe. We produced some pretty fair apple jack, but it went fast. We also pasteurized some to kill the yeast and bottled apple juice, which lasted a lot longer. Grandpa had planted apple trees as a wind break and the trees did double duty, breaking the wind and providing fruit which became eating apples, apple sauce or apple juice/jack.

The only liquor I wouldn’t trade off were the premiums, Jack Daniels Single Barrel, Bombay Sapphire Gin, Chivas Regal Scotch, Cuervo 1800 Tequila, Grand Mariner, the good Cognacs, etc. The bottles of Cristal received delicate handling and were rotated to keep the cork moist. All Cristal is vintage champagne. That’s why it goes for \$2,400 per 6 bottle case. We didn’t find much; Moët was the most commonly found product, specifically their Dom Pérignon. If I recall correctly, James Bond preferred the 1952 vintage. The instructions said, *Dom Pérignon’s complexity is based on a commitment to slow aging. Dom Pérignon Vintages can be enjoyed after many years when stored with care. Best kept at a steady 11-15 °C (52-59° F) in a moderately humid (55%-75%), dark place, with no strong odors – approximating the ideal conditions in the Dom Pérignon cellars where the wine has aged at least eight years.*

Now, I like the Tennessee whiskey and usually drank Gentleman Jack. I served Jack Black when we had company and save the Single Barrel for special occasions. It was much the same with all of the liquors, a real premium, an in-between and a lesser for company. This way, we had a lifetime supply of the really good stuff. I’d served some Jack Daniels green label at the wedding reception, after rebottling it in Jack Black bottles. After 2 drinks, they couldn’t tell the difference.

We got the trailer set into place, leveled and connected. We slipped into the city to get furniture. The master bedroom got king sized, one bedroom a set of bunk beds and the other a twin and a crib. We fiddled around getting it just so, just in case. Surprisingly, the subject didn’t come up and we didn’t bring it up.

Soon enough Susan was expecting and said she'd be able to help with the garden until she got too big. Tammy and I exchanged that, *Yeah, right* look. We still had Lena lending a hand and working darn hard. Morning sickness occurs in over 50% of all pregnancies. We had some Omeprazole (Prilosec generic) which might help, or not. It would treat any Gerd she might have but there were so many contributing factors to morning sickness, one could never be sure.

Tammy told me that Lena had initially had such a longing look when Susan announced her pregnancy that disappeared when the morning sickness occurred. She went on to say she couldn't really gauge Lena's reaction after that. I replied that the singlewide was a just in case move because I figured sooner or later Rob and Lena would follow the path Allen and Susan chose.

We almost didn't find out. They came during the night and encircled the Trailer Park. I woke the others and suggested we gather in the shelter to discuss what had occurred.

"What's going on?"

"They have the Trailer Park encircled. I lost count around 200. They're mostly armed with small arms."

"Mostly?"

"Saw some medium and heavy machineguns. Looked like they might have rockets."

Author's Note:

Small arms is a term of art used by armed forces to denote infantry weapons an individual soldier may carry. The description is usually limited to revolvers, pistols, submachine guns, carbines, assault rifles, battle rifles, multiple barrel firearms, sniper rifles, small rockets (LAWs/ M136 AT-4), squad automatic weapons, light machine guns (e.g. M60), and sometimes hand grenades. Shotguns, general-purpose machine guns, medium machine guns, and grenade launchers may be considered small arms or as support weapons, depending on the particular armed forces.

Small arms typically do not include infantry support weapons. In the US military, small arms refer to handguns or other firearms less than 20 mm in caliber, and including heavy machine guns (typically .50 caliber or 12.7 mm in US service). The NATO definition extends to "all crew-portable direct fire weapons of a caliber less than 50 mm and will include a secondary capability to defeat light armor and helicopters."

Though there is no civilian definition within the US, any firearm utilizing a projectile greater than ½ inch (.50 caliber or 12.7 mm) in diameter is legally defined as a *destructive device*, while anything .50 caliber or less is normally considered *small arms*. The so-called *½ inch rule* does not apply to shotguns, sporting cartridge big bore rifles (such

as rifles chambered in .600 Nitro Express) or muzzle loading black powder firearms, many of which are larger than .50 caliber.

End Note

“What do you want to do?”

“Thanks to that tunnel, we can get from here to the barn. We have the 3 crew served weapons and 2 TAC-50s. Someone will have to settle for the TAC-338.”

We would have to move from the barn to the ditch connecting the fighting positions... easy in the full dark... just walk until you fall in or use a red filtered LED flashlight. I got the loft, Lena, Tammy and Susan the Hummers and Rob and Allen the fighting position trench. I figured the attack would come at oh-dark-thirty aka 3am when the sentries wouldn't be at their peak.

“Bob, Jacob.”

“You're up!”

“Sentry caught them sneaking in and setting up. We're ready when they are. ETA?”

“I was thinking 3am.”

“Me too. How are they equipped?”

“Small arms with some light, medium and heavy machineguns. Didn't see an Mk-19 but I'm sure I saw rockets. What are you doing over there?”

“Emplacing the sandbag merlons.”

“You did listen!”

“Yeah, we just finished filling them yesterday and planned to put them up this morning.”

“You should probably kill the lights and use red filtered lens covers.”

“On it. Anything else?”

“Pray. Do you need anything else?”

“Hand grenades, if you can spare some.”

“Send someone over with a flatbed trolley. I'll give you what we can spare, 6 cases.”

Despite having the defenders advantage The OpFor outnumbered the number of Trailer Park combatants. I didn't have a good feeling about how this would turn out because I didn't know what the Trailer Park SIOP was. They killed the lights and stacked the sandbags. I could see a few of the OpFor gather and hold an animated conversation. Apparently whoever argued for an immediate attack lost the argument. The attack came at 0256; somebody's watch was 4 minutes fast.

The OpFor opened up with all they had, machineguns, rockets and rifle fire. The Trailer Park didn't respond. The OpFor moved forward and started a second round and again the Trailer Park didn't respond. Finally the OpFor charged and was cut to ribbons. There is something to be said for proper timing. The lights in the Trailer Park were brought up and the defenders set out to check the OpFor casualties. The survivors were reclassified as KIA. Weapons, ammo and other small arms were collected.

There would be no shortage in arms and ammunition or other small arms for the immediate future and beyond. A dozer was used to dig a mass grave and after searching each individual member of the OpFor, they were tossed into the pit.

"We didn't know if you had a plan."

"Blame that on the Gunny. He raised so much hell over the shortcomings of our defenses we gave in and put him in charge of getting sand bags filled and installing those merlons you harped about. It would appear that the two of you were right."

"Told you so."

"What did you do during the attack?"

"Watched."

"Why?"

"Why not?"

"What do you mean why not?"

"I'm making a point. I get darned tired of people asking why. There are as many answers to the question as there are questions. Let's see: we didn't want to get involved because of how many were in the OpFor; or, we didn't want to draw attention to ourselves; or, we wanted to see if you could handle it on your own. I could go on but you should get the idea."

"That's not very neighborly."

Weather Patterns – Chapter 14

“You got that right. Initially, we offered suggestions, like setting up a mobile home park. Then you started making decisions on your own or as a group. You made a few glaring errors that could have been avoided if you’d only asked. As a result we opted to mind our own business and let you live with result of those mistakes.”

“For instance?”

“You should have buried the 30,000-gallon propane tank and found a location outside the Trailer Park to store the extra fuel. You knew we acquired the pumper, extra hose and even drilled a larger well and put in a 40,000-gallon water tank. But you didn’t think to install fire hydrants in the Trailer Park although you expect us to help fight the fire and supply the pumper and water if one does breakout. Our water storage and pump only gives us 57 minutes to knock down a fire. You should get with Al and drill more wells and maybe move that water tower from town to out here.”

“I don’t know that we could.”

“Someone installed it, probably in sections. You can dismantle it in sections, move it and reassemble the sections. A quarter million gallon tank feeding a 1,000gpm pumper would give you 4 hours of firefighting time plus whatever is added to the water tower while you’re emptying it. Our pump draws 40,000-gallons in about 101 minutes. It’s rated at about 400gpm depending on the head.”

“I’ll bring it to the Committee.”

“You’re running the Park with a Committee now?”

“Yes we are; how does that concern you?”

“It brings to mind something TOM once said. *In all the towns and all the cities there are no statues to Committees.* I think his point was that a Committee is the most ineffectual way to govern your community under the present circumstances.”

“What would he know about it?”

“BA in Business and Economics from Wartburg plus an MBA from Drake. He may be another Sergeant Schultz and *know nothing* but I wouldn’t bet on it. He claimed that others within the Revenue Department considered him one of the most skilled auditors on staff. Plus, anyone who likes M1As and 590A1s can’t be all bad.”

“Bull. If he’s really smart, what was he doing living in the state of Communista?”

“Couldn’t afford to move?”

“But Palmdale got wiped out by that earthquake.”

“That doesn’t mean he and his family did. He shows up, I’m going to make him the happiest man in the US of A. Read my lips, TAC-50A1R2 with Nightforce 12-42x56mm Mil Dot scope with McCann Night Vision Rail supporting a MUNS and Elite Iron suppressor with a total of 10 magazines and 1,200 rounds of Hornady 750gr A-MAX and 1,200 rounds of Mk211MP. An M1A Super Match with a parkerized barrel, Nightforce 8-32x56mm Mil Dot scope, an aftermarket rail for the MUNS, a Harris bipod and Surefire suppressor plus 2 50 round drums and 22 25-round magazines with a few cases of M118LR. A Mossberg 590A1 SPX with aftermarket 15 round sling, 6 round sidesaddle and 6 round butt cuff with 2 cases each of Brenneke 3” Black Magic 1³/₈ oz. slugs, 2 cases of Remington Magnum Express 3” 15 pellet 00 and 3” 41 pellet no. 4 buckshot. And to make his day, a Taurus PT1911B-1 with light and a total of seven magazines shooting 200gr .45acp +P. To round it out, a 24” Cold Steel Latin Machete and his choice of a San Mai III Natchez or Laredo Bowie. Finally, an HK-416 and an HK-417 with associated accessories.”

“You have those things?”

“If I’m lying, I’m dying. Now, I need something from you and I’ll give anything reasonable that you ask to have them.”

“What would that be?”

“Six M-72A7 rockets. You can keep the grenades we gave you that you never used in exchange.”

“Gee I don’t know. Does he know how to use one?”

“I have no idea. He often points out that *he’s read the Field Manual.*”

“What is he, nuts?”

“Probably. But he knows what he likes.”

“Ok, 6 rockets for the 6 cases of hand grenades.”

“We’ll need them sooner than later.”

“Why?”

“Now, there you go again. I just have a gut feeling the sooner beats later.”

Author’s Note:

He let off the pistol belt, holster, 3 Ripoff CO-21V magazine pouches, Y suspenders, 2 stainless canteens with pouches, one with a cup and the other with a stove plus the butt pack for extra ammo and or first aid kit plus water filter. Already have the MSA gas mask with CBRN filters, drinking tube and ESP II voice amplifier with carry bag. Oops check that, I'm dead, right? Are you sure?"

Those magazine pouches were a real find. Had no. 2 son looking for pouches that would hold the 8 round Taurus magazines. He found one in a Post PX and sent it to me. I did a search on the net and found them at Film Tools. That's a big outfit in Hollywood that supplies filmmakers with anything from cameras to pouches. They'll hold Glock, Beretta and the Taurus magazines. They run about \$22 but are ideal and close with a Velcro strap.

My ghost is saving up for a Super Match and once I sell 400 CDs, I'll be able to afford it. I only need to sell 383 more. As indicated earlier, it won't be cheap. First I'll have to get the stainless barrel parkerized (impossible) and add the Harris bipod and Nightforce 8-32x56mm scope. Might go with an AN/PVS-10 instead. Then the hard part, the Surefire suppressor and 25-round CMI magazines and maybe a couple of 50 round XS Products 50 round drums and, even harder 5,000 rounds of M118LR ammo at \$1 per round.

Next the PT-1911B-1, another illegal item with 7 magazines (actually legal, they hold 8 rounds. Next to last replacing the 590A1 with a 590A1 SPX and finally, getting a SR-556, also illegal. The SR-556 only really differs slightly from the Mini-14 in that it has pistol grip, better piston assembly, different stock and is more accurate. I've never met a gun law I didn't want to break since there is little uniformity between the 50 states over what's legal and what's not.

All of which is similar to what I had before. The Sauer und Sohn can be replaced with Walther PPK in .380 unless I go with a G-21SF and G-30SF in which case it would be redundant.

A person's taste in firearms is strictly personal. The M-14 and subsequent commercial M1A represent the last Main Battle Rifle fielded by the US military and US military shot-guns have been 12 gauge for 115 years. The PT-1911B-1 is a Product Improved John Browning design. The only reason to switch to Glocks is their inherent reliability and affordable price. But it could mean buying more illegal magazines and two types of Gold Dot, standard for the G-21SF and short barrel for the G-30SF.

The only consistent source I've found for the M118LR is Lucky Gunner. With Iraq Over and Afghanistan winding down, surplus will be available somewhere.

"Forgive me Father for I have sinned, I voted for Obama."

"You're forgiven, go forth and sin no more."

Me, I was a Methodist. We dabble rather than dunk and don't confess, ever.

I'd met up with a one-year-old Missy right there at Rainbow Bridge. But I had to earn my wings and hear the bell toll so our reunion was brief. We'd survived WW III and Yellowstone but a large warhead hit near Palmdale right where Highway 14 cuts through the fault. It brought our house down but luckily, I was the only one killed. I figured to be shoveling coal for an eternity, but ended up the other direction.

After my reunion with Missy, I set forth on my task to earn my wings and hear the bell toll. *Ask not for whom the bell tolls, it tolls for thee.* ("No man is an Island, entire of itself; every man is a piece of the Continent, a part of the main; if a Clod be washed away by the Sea, Europe is the less, as well as if a Promontory were, as well as if a Manor of thy friends or of thine own were; any man's death diminishes me, because I am involved in Mankind; And therefore never send to know for whom the bell tolls; It tolls for thee." – John Donne)

I was surprised to find myself in Williamsburg, Iowa. The town had burned to the ground; at least what would burn was gone. I recognized the restaurant that Sharon and I occasionally ate at when we lived in Davenport. It wasn't part of the town, hence hadn't burned down but was abandoned. I heard shooting in the distance and headed there to see if I was needed.

"What happened here," I asked.

"Who wants to know?"

"My name is Gary Ott."

"TOM?"

"Some have abbreviated my pen name to the abbreviation TOM, yes."

"How did you get here?"

"That's a long story. That second round of the war where the Chinese nuked Yellowstone and the San Andreas was my undoing."

"Been shoveling coal?"

"Actually, to my surprise, I ended up at Rainbow Bridge and spent some time with Missy. I was sent back to earn my wings."

"Like that old Jimmy Stewart movie, *It's A Wonderful Life*?"

"I never cared for the movie but something like that, yes. As I asked, what happened here?"

“The Trailer Park was attacked but they prevailed. Man do I have some things for you.”

“I don’t require anything these days since my needs are met.”

“Nevertheless, I have a TAC-50A1R2 with Nightforce 12-42x56mm Mil Dot scope with McCann Night Vision Rail supporting a MUNS and Elite Iron suppressor with a total of 10 magazines and 1,200 rounds of Hornady 750gr A-MAX and 1,200 rounds of Mk211MP. An M1A Super Match with a parkerized barrel, Nightforce 8-32x56mm Mil Dot scope, an aftermarket rail for the MUNS, a Harris bipod and Surefire suppressor plus 2 50 round drums and 22 25-round magazines with a few cases of M118LR. A Mossberg 590A1 SPX with aftermarket 15 round sling, 6 round sidesaddle and 6 round butt cuff with 2 cases each of Brenneke 3” Black Magic 1³/₈ oz. slugs, 2 cases of Remington Express Magnum 3” 15 pellet 00 and 3” 41 pellet no. 4 buckshot. And to make your day, a Taurus PT1911B-1 with light and a total of seven magazines shooting 200gr .45acp +P Gold Dot. To round it out, a 24” Cold Steel Latin Machete and your choice of a San Mai III Natchez or Laredo Bowie. Finally, an HK-416 and an HK-417 with associated accessories.”

“Maybe I could pass them on to my younger son and he to my older son. They’re hunkered down in the Lake City, Arkansas area. What no rockets or grenades?”

“A full case of 30 M-67s and 6 M-72A7s.”

“I don’t know if my new boss would approve.”

“Sure he would, you’d be helping out your family. You can have a Walther PPK in .380 for backup or if you prefer, I’ll replace the Taurus and Walther with a G-21SF and G-30SF.”

“The whole world has turned to plastic. I wouldn’t be interested in plastic pistols. I think perhaps the Laredo Bowie; the false edge is sharpened for about 4¹/₂.”

“Jacob is bringing the rockets, we have the remainder here.”

“It would seem that my help isn’t needed here.”

“I wouldn’t think so, Jacob might want to commit suicide over his poor handling of the event but I’d imagine he’ll be too busy moving the water tower out here to worry about it.”

“I was sure I was needed here.”

“Sorry, you were a bit late. They handled it themselves.”

“Did you help?”

“We watched, it wasn’t our fight.”

I was thinking that they weren’t very neighborly, but didn’t have the full details and the fight was over. I’d take the presents and blink my eyes to move them to Lake City. Or, was that *Bewitched*? By the way, just as Missy was no longer old, blind, etc. my health problems were cured, my morality issues resolved and I appeared more like my early 20s and had never started drinking. My kids wouldn’t recognize me because I turned 28 shortly after Damon was born and 31 shortly after Derek was born.

“Hi, my name is Tom. I have some presents for you to help you through your time of need.”

“Really? What’s this all about and what do you have?”

“Firearms and ammunition. You keep the new stuff and give the older stuff to your brother.”

“He’s not here at the moment. He’s doing something with the Zombie Squad.”

“What I brought was a TAC-50A1R2 with Nightforce 12-42x56mm Mil Dot scope with McCann Night Vision Rail supporting a MUNS and Elite Iron suppressor with a total of 10 magazines and 6 cases of Hornady 750gr A-MAX and 10 cans of Mk211MP. There’s an M1A Super Match with a parkerized barrel, Nightforce 8-32x56mm Mil Dot scope, an aftermarket rail with another MUNS, a Harris bipod and Surefire suppressor plus 2 50 round drum magazines and 22 25-round magazines with a few cases of M118LR. You’ll also find a Mossberg 590A1 SPX with aftermarket 15 round sling, 6 round sidesaddle and 6 round butt cuff with 2 cases each of Brenneke 3” Black Magic 1 $\frac{3}{8}$ oz. slugs, Remington Express Magnum 3” 15 pellet 00 and 3” 41 pellet no. 4 buckshot. Your primary handgun is a Taurus PT1911B-1 with light and a total of seven magazines shooting 200gr .45acp +P Gold Dot. Your backup gun is a Walther PPK in .380 with ammo and 3 magazines with ankle holster for the gun and another for the spare magazines. Plus, there are long barreled HK-416 and HK-417 with associated accessories. Your blades are a 24” Cold Steel Latin Machete and a San Mai III Laredo Bowie.”

“Thank you. I already have most of those. Say, you look familiar. Do I know you?”

“Not really as I am now. You don’t have a TAC-50A1R2, you have a Loaded, not a Super Match, although you don’t like bayonets, you don’t have one for your shotgun. Almost no one has the select fire H&K rifles. Your knives are the Rambo knock-offs plus 2 Bucks and the Explorer boot knife. I added an Andrews Leather Monarch shoulder holster with 3 offside magazine pouches and the knife sheath for your boot knife. There’s one last set of firearms, just in case.”

“Just case of what?”

“Just in case you run out of ammo and your friend can’t reload more. You can reload this ammo yourself. The calibers are .45-70 Government and .45 Colt. Both cartridges can be reloaded with black power or Pyrodex. The Revolvers are Ruger Vaqueros, the original models not the new model. The rifles are genuine Winchesters, the 1886 and the 1892. There are several cases of cartridges plus Pyrodex and primers. Who is that over there?”

When he turned to look I simply disappeared. I heard the bell toll and headed off to pick up my wings and cross Rainbow Bridge with Missy. I sure hope Damon and he don’t look through the box of photos Joyce kept.

Sorry I got distracted.

End Note

Obviously Jacob produced the rockets in short order and TOM showed up before I had a chance to examine them. I have the Field Manual too, if I get curious. A group of Iron workers including welders left to start cutting up the water tower. They would have to dismantle it from the top down and reassemble it from the bottom up. At least someone thought to bring an indelible marker and number the pieces as they cut it down.

Wait one minute, TOM said he was killed. What was he doing here? He didn’t look like a zombie nor did he look to be in his 70s. I’d put his age in his early to mid-20s. He didn’t have the puffy red face of a drunk either. I said I had a present for him and I gave him the present, down to the last round of ammo. Excuse me, Here come Rob and Lena and I can see a serious look in his eye.

© 2012, Gary D. Ott